

# AMERICAN AGRICULTURIST,

ADAPTED TO THE  
Farm, Garden, and Household.

AGRICULTURE IS THE MOST HEALTHFUL, THE MOST USEFUL, AND THE MOST NOBLE EMPLOYMENT OF MAN—WASHINGTON.

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### July.

"Summer is here!

Amid the distant vales she tarried long;  
But she hath come; oh joy! for I have heard  
Her many corded harp the livelong day  
Sounding from plains and meadows, where of late  
Rattled the hail's sharp arrows, and where came  
The wild north wind, careering like a steed  
Unconscious of the rein. She hath gone forth  
Into the forest, and its poised leaves  
Are flat formed for the Zephyr's dancing feet.  
Under its green pavilions she hath reared  
Most beautiful things."—EDITH MAY.

All over our broad land, the Summer has come.  
It has been fully three months in its march from  
the coast of Florida and the Gulf to the fir clad  
hills and mountains of northern New-England.  
The flaunting corn leaves do not stand higher to-  
day on the banks of the Kennebeck than they  
stood on the first of April on the banks of the  
St. Johns, and the Suane. But now we have  
one grand Summer day from the far North to  
the South, a tropical sun raging alike in the back-  
woods of Maine, and in the cane brakes and cy-  
press swamps of the Delta of the Mississippi.  
Already her fairy creations begin to appear full  
robed, complete in outline and in their filling up.  
As June was a month of promise and growth,  
July is a month of fruition and accomplishment.  
The designs of the mighty stir of Nature in the  
earlier months, begin to appear. It is no longer  
doubtful what the springing corn means. It has  
struggled up through the blade, the thin yellow  
leaves, into rank lustrous stalks, luxuriant silken  
tassels, perfumed spikes, shaking their pollen  
upon the Summer air, and heralding the harvest.  
Hope changes into full assurance, and the farmer  
sees in the present aspect of his fields, that  
which shall be in Autumn, "some thirty fold,  
some sixty, and some an hundred."

Every where in field and forest, we see not  
only promise but fulfillment. The wheat, rye, and  
oats are already of full hight, or harvested. The  
clover fields are gorgeous with their red blos-  
soms, and musical with the murmuring sounds  
of *Hymettus*. Here the meadow is burdened with  
timothy shaking its nodding plumes, and there,

the red-top stretches away in graceful undula-  
tions like some discolored sea.

In the orchard and fruit yard, the apples are  
swelling rapidly, and the limbs begin to bend un-  
der their precious burden. The robins are gath-  
ered to their Summer feast in the cherry trees  
and among the currant bushes, levying their tax  
upon the garden, for their busy labors in destroy-  
ing insects. The pears and plums are looking  
finely, and the melons are already studded with  
fruit.

In the forest, every leaf is busily at work, and  
showing the results of its labors in the new green  
shoots and in the enlargement of the growths of  
former years. In many cases, the terminal bud  
is already formed, and the two or three feet of  
new wood marks the whole growth of the sea-  
son. The labors of Summer, henceforth, will be  
to consolidate and perfect what has already been  
marked out in the department of Nature's  
operations, as well as in that of human industry.

The month is somewhat typical of the present  
condition of the arts and inventions that propose  
to aid the husbandman. The tentative period is  
past, and we are beginning to realize in well  
made implements the great economy of *applying  
mind to husbandry*. It would be interesting, if we  
had the facts and the space to display them, to  
trace the history of the plow from the forked stick  
of the ancients, to the present deep tiller, or  
Michigan, turning under the sod and thoroughly  
pulverizing the soil to a foot in depth. The ne-  
cessity of disturbing the soil was very early re-  
cognized, and the use of oxen for this purpose is  
as old as the Greeks. But very little progress  
had been made in this art until the last century,  
and the last thirty years have done more to com-  
plete this implement than all preceding time.

But the tool is no sooner perfected, than we  
begin to feel the need of a new agent of traction  
to supersede the dull gait of the ox, the mule,  
and the horse. The plowing of the sea by steam  
has suggested the plowing of the land by the  
same motor, and already the steam engine is  
linked to the plow, and marching over the prai-  
ries. The perfected clod-rasper, tearing up the  
soil to the depth of a foot or more, and commi-  
nuting it to the fineness of a garden seed bed,  
can not be very far in the distance.

The first conception of a hoe was doubtless sug-  
gested by a potsherd, or a clam shell fastened to  
a handle, to admit of the easier chopping off weeds  
and drawing the earth toward the cultivated  
plant. The hoe of the plantation, now in use in  
most parts of the South, is still of the potsherd  
pattern, better only in material, and in being fur-  
nished with an eye for the insertion of the handle.  
There is a long reach upward from that ponder-  
ous unwieldy implement to the light glittering  
steel blade and elegant turned handle, with which  
a Yankee dresses out his corn and potatoes. If  
the hoe is efficient in the human hand, it is still  
more so when applied by horse power. We have

accordingly the sharp steel blades inserted in a  
frame, and made to be adjusted to a narrower or  
wider space at the will of the operator. A skill-  
ful hand with one of these tools and a horse, will  
till more corn or potatoes, than ten men with hoes  
alone. What an immense saving of manual la-  
bor this single tool would make, were it univer-  
sally introduced.

The scythe and the horse mower are still seen  
in adjoining fields, and there is as great a dispar-  
ity between them, as between the hand and the  
horse hoe. See the mower as he bends to his  
work among the thick grass from the early morn-  
ing to high noon. There used to be poetry in his  
work before we knew any thing better, and we  
thought him a fitting type of the great destroyer.  
Who does not remember that august and horrible  
individual in the Primer, scythe in hand, and the  
couplet

"Time cuts down all  
Both great and small."

That picture would now look like a weak con-  
ception of a very rude age, and we should seat  
old father Time in the car of a horse mower,  
rein in hand, with fiery skeleton chargers, sweep-  
ing down more victims before his remorseless  
scythe, than his prototype in the Primer ever  
dreamed of. We no longer hear music in the  
ringing steel, as the mower whets his blade or  
drives it through the falling grass. The contrast  
between the gentleman of leisure upon the seat,  
and the stooping laborer dripping with sweat,  
and panting in the Summer sun, is too great.  
The poetry is transferred from the scythe to the  
mounted car, and we hear music in the sharp  
clatter of its triumphant march. There is a beau-  
ty in the smooth evenly spread grass as it lies in  
the track of the mower, that we never saw in the  
roughly piled swath made by the scythe. It  
suggests no painful posture, no strain of the mus-  
cles, no sweat of the brow. Invention is at  
length consolidated into an effective machine,  
that puts the hay and grain harvests completely  
under the control of the husbandman.

So, in all the ingenious contrivances for saving  
labor in the field and in the garden, in the dairy  
room and in the granary, and, indeed, in every  
department of labor upon the farm we see sub-  
stantial growth. So far as effectiveness in tilling  
the soil is concerned, one man has more power  
now, than a score of men had a hundred years  
ago. And the end is not yet.

The account given on a subsequent page of the  
inventions of agricultural implements during a  
single year, shows the attention given in this di-  
rection, and an increased number may be looked  
for in subsequent years. It needs that the intel-  
ligence of the cultivator shall keep pace with  
these improvements, that he may avail himself of  
the advantages they bring, and also be prepared to  
judge of the value of new implements offered:  
otherwise the best may die of neglect, and the  
inferior be purchased to his own detriment.

## Calendar of Operations for July, 1860.

[We note down sundry kinds of work to be done during the month, to call to mind the various operations to be attended to. A glance over a table like this will often suggest some piece of work that might otherwise be forgotten or neglected. Our remarks are more especially adapted to the latitudes of 38° to 45°; but will be equally applicable to points further North and South, by making due allowance for each degree of latitude, that is, earlier for the South, later for the North.]

**EXPLANATIONS.**—*f* indicates the first; *m* the middle; and *l* the last of the month.—Doubling the letters thus, *ff*, or *mm*, or *ll*, gives particular emphasis to the period indicated.—Two letters placed together, as *fm* or *ml*, signify that the work may be done in either or in both periods indicated; thus, work marked *fm*, indicates that it is to be attended to from the first to the middle of the month.]

**Farm.**

Now the laborer in the field must indeed "eat bread in the sweat of his face." The vertical sun, with wilting force, reminds the mower that the grass falling before his stroke is a fit emblem of his own frailty. At no season is there greater danger of overtaxing the strength, and laying the foundation of disease, even if immediate prostration does not result. The hay must be secured, the harvest waves impatient for the reaper, and other operations will soon press for attention. It is well if the culture of head crops has been completed, and nothing but the appropriate work for the month remains to be done.

The husbandman may learn wisdom from the birds. They are astir with the earliest light, busy with work and with song, filling the fields with life. As the day advances, and the heat increases, they seek the shade, and remain quiet until the sun declines. Let the farmer imitate them. Lead the mowers to the field at break of day, and when the heat becomes oppressive, leave the sun to work for you, upon the mown grass. Then, when the afternoon breeze tempers the air, the work of securing will be performed with renewed vigor from the long mid-day rest.

**Barns and Sheds.**—Complete preparations for receiving the hay and grain crops. Shelter, however rude, is preferable to stacking. Have the barn-yard cleared of manure, and platforms leading to the barn floor in order, that the heavily loaded carts may be run in easily.

**Bees.**—Watch for second swarms, guard against bee moths, and follow other directions given under "Apiary" in this number.

**Buckwheat.**—Sow, *ff*, to *m*, a half bushel to three pecks per acre on well worked soil. A crop may be secured from fields where corn has failed. It may be sown also where clover or grass has run out, to be followed by rye or oats, and reseeded next Spring, if the land is in good heart.

**Butter.**—Greater care is needed to produce good butter during the hot season, but with a cool, well ventilated dairy room, and the use of ice when necessary, it can be made. Exclude flies from the milk-room.—Frames covered with wire gauze or millinet and placed in the doors and windows will do this, and allow free passage of air.

**Cabbages** for a late crop may still be planted. Set them *ff*, between rows of early potatoes, and other crops soon to come off, or on unoccupied ground.

**Cheese.**—As warm weather renders butter making more difficult, cheese making will profitably take its place. Do not attempt to make butter and cheese from the same milk. "White-oak" stock is too plentiful in market.

**Corn, sorghum, or other crops for soiling** will be serviceable if put in, *ff*. That earlier planted should be entirely freed from weeds before haying commences. If they are kept down until the ground is well shaded, there will be little further trouble.

**Fences.**—Keep in repair at all seasons.

**Haying** should commence with the proper maturity of the grass. By the use of the mower, horse-rake, and horse-power pitch fork, the greater part of the yield may be secured while in the best condition. If left until the seed ripens, the stalk becomes woody and loses much of its sweet and nutritious properties. Immediately after the blooming when the seed is just forming, is considered the best condition for making superior hay. If possible, allow no dew to fall upon hay in the swath, except that cut late in the day. Hay cured in the heap is better than when left exposed to the sun until perfectly dry. Cock it up when sufficiently dry not to ferment. Secure from rain with hay caps. Salt sprinkled on the mow occasionally as the hay is stored, will assist in keeping it in good condition, and render it more palatable, especially if of inferior grass, or not in good order when stored. In stacking, lay a good platform of rails and slabs to keep the bottom layer sweet.

**Hoeing** will need attention if not thoroughly completed last month. Improve poor hay weather by tilling plowed ground, and thus making good corn weather.

**Manures.**—Weeds, coarse wild grasses cut from swales, etc., should not be left to rot on the ground. Cart all such

refuse to the barn yard, and keep the pig pen supplied for increasing the manure heap. Apply plaster, chloride of lime, or copperas, one lb. to three gallons of water, to privy sinks, around sink spouts or other places where rapid decomposition of waste matter now gives out noxious gases. This will convert them into valuable manure.

**Oats.**—Cut before ripe enough to waste by shelling. They will weigh heavier if gathered before dead ripe.

**Pastures**, if fed too close, suffer greatly from the scorching sun upon the almost unprotected roots. If too much stock is on hand, reduce the number, or make up deficiency of feed with cuttings from the soiling patch.

**Poultry.**—Keep from grain fields, confining them to their enclosure if necessary. If left to run at large, the abundant supply of insects will incline them to lay freely. Collect eggs, and allow no hens to sit at this late season.

**Potatoes.**—Dig early varieties as they mature, and sow turnips or plant out cabbages in their place.

**Rye.**—Cut as soon as sufficiently ripe, and secure before injured by dew and rain.

**Seed.**—Select the best parts of the fields of wheat, rye, or other grain, and leave to mature fully before being gathered. Remove all weeds before binding up, and when gathered, store it separate from the general crop.

**Sheep.**—Keep in thriving condition by good range of pasture. Secure against dogs—visit and salt at least weekly. Read article "Sheep Raising" in this number.

**Swine.**—Follow directions of last month.

**Timber** cut during this and the following months is generally considered more durable than when felled in Winter, particularly those kinds which abound in sap. If practicable, secure enough for next season's wants for fencing and building purposes.

**Tanner's Bark.**—Hemlock and oak bark will "run" during most of July, and may be peeled at any time unoccupied by other labor.

**Tools.**—Keep all cutting instruments well sharpened, and gearing of mowers, reapers, etc., well oiled. Repair implements needing it in the workshop, on rainy days.

**Turnips.**—Sow for full crop, *f, m*, before the 20th if practicable, but later if necessary. Newly reclaimed land is most favorable for their culture. Make the soil rich, mellow and dry.

**Wheat.**—Cut and secure the same as rye.

**Orchard and Nursery.**

Success in fruit raising requires first, a vigorous growth of the trees, and then a regulation of growth to induce bearing. The work of previous months, enriching the soil, loosening and keeping it in proper mechanical condition, and subduing weeds or other growth interfering with that of the orchard, if properly performed, will secure the first requisite. Attention should now be given to directing the energies of the trees to forming fruit buds for next year's bearing. This can be done by judicious pruning. If left until late in Autumn or next Spring, the benefits of removing superfluous wood are but partial, as we then take away that upon which the strength of the tree has been wasted. The orchardist needs, in this and other operations, to work at least a year in advance; and he may do this with reasonable expectations of seeing and enjoying the fruits of his labors.

**Birds** are taking toll from the ripening fruit. Where they are very troublesome, choice trees will need some kind of protection. Small windmills, with a rattle attached, placed near the trees, will be of some service.

**Budding** young stocks of the plum, cherry, and pear will need attending to in the nursery during the middle and latter part of July. This operation will be found preferable to grafting, and is more rapidly performed.

**Cherries.**—Pick later varieties now ripening, for market and for putting up in cans or bottles as described on page 214 of this number. Secure a good supply of pits for planting, and put them in earth before they become dry.

**Fruit Stealers.**—Prevent their depredations by judicious liberality with fruit. Where this means fails, apply watch-dogs, and the force of the law.

**Grafts.**—Examine occasionally, and keep coatings of cement in place, renewing if needed. Rub off superfluous shoots from the stock. Give support to rapidly growing shoots that need it, by tying to adjoining branches.

**Hoe** as often as necessary to keep down weeds, and loosen the soil. If severe drouth prevail, plow frequently between the rows.

**Inarching** may now be performed on both deciduous and evergreen trees.

**Insects.**—Caterpillars, millers, slugs, aphides, the curculio tribe, and other depredators must be met with syringing with whale-oil soap, dustings with lime or ashes, hand picking and other appropriate means of destruction. The birds are busy paying for the fruit they take, by assisting in keeping them in check.

**Layering** can now be done with the growth of the present season on stools kept for propagation and on grape vines, flowering shrubs, etc.

**Manure**, *ff*, trees bearing a heavy burden of fruit to prevent exhaustion and consequent barrenness in succeeding years. Improve dry weather by securing an abundant supply of muck to be composted for future use.

**Plow** between nursery rows whenever needed to loosen the soil and destroy weeds. Avoid disturbing the roots.

**Prune** out limbs that crowd and chafe, and those that interfere with a well shaped head. Clean out all useless suckers around the trunk or upon the limbs. Make all cuts close to the stock and pare perfectly smooth. When large limbs are taken off, cover the wound with grafting cement, or gum shellac dissolved in alcohol. To induce fruit buds on trees growing to wood, pinch off the ends of the rampant shoots. If this be judiciously done year by year, and superfluous growth is removed in the same manner when first formed, there will be little need of further pruning, and less injury will follow than from the excision of large limbs.

**Thin** fruit on overbearing young trees, and prop up the branches of older growth when heavily loaded. By removing part of the fruit, the remainder will be of finer size and quality. Trees reset this year should not be allowed to fruit, save, perhaps, a few specimens.

**Weeds** are out of place above the surface, return them to the place whence they sprang.

**Kitchen and Fruit Garden.**

The previous labor bestowed here is now rewarded with an increasing variety of delicacies of the season. To make the most of the ground and bring ripening vegetables to early maturity and highest excellence, require watchfulness and pains. Weeds and insects are ready to cut off the gardener's plants and hopes; crowded roots are struggling for room; and tender plants droop for water if there be drouth. There are also early vegetables to be gathered and their places to be supplied with seeds for late Fall use.

**Asparagus.**—Make no more cuttings, but allow it to mature and thus strengthen the roots for the following year. Keep down all weeds.

**Beans.**—A few of the quick growing kinds, as Early Valentine, Refugee, and China, may still be planted, *ff*. Such as are not sufficiently hardened in the Fall to keep, may be preserved in cans.

**Beets** for winter use will come on in season, if sown *ff*, and well cultivated. Continue to weed and thin former plantings. Leave them standing eight to ten inches apart in the rows.

**Blackberries.**—Keep the canes tied to stakes or trellises, and support branches heavily loaded with fruit, to keep from splitting down. As the new shoots push forward train them to the trellis.

**Cabbage and Cauliflower.**—Set out, *ff, m*, for latest crop. A little care in transplanting will save the growth of one or two weeks. In gathering early cabbages for table use, cut them off and leave the stumps in the ground; the new growth of sprouts will furnish excellent greens.

**Celery.**—Plant out for late crop, *ff*, as directed last month. Hoe former plantings frequently.

**Corn.**—Plant *ff*, for latest use, and for drying and preserving in air-tight vessels. Hoe lightly around that grown two feet high or more, to loosen the surface and destroy weeds, but not to disturb the roots.

**Cucumbers** for pickles may still be planted, *ff, m*. Continue to hoe former plantings and destroy insects.

**Currants.**—Gather for making jelly when first ripened. If left too long, much of their gelatinous principle, (vegetable albumen), changes to sugar, and jelly is formed with difficulty, and will "candy" when kept for a few months. Leave those intended for preserving whole, until fully ripe. To increase the size of specimens, pinch off the ends of the shoots an inch or two beyond the fruit.

**Egg Plants.**—Though rather late now for setting out, if transplanted, *ff*, on good soil, and hastened forward by frequent hoeing, and occasional applications of liquid manure, they may succeed.

**Endive.**—Set out, *ff*, for late use, and sow seed at same time for winter crop.

**Gooseberries.**—Thin out the berries if the bushes are well filled, using the first pickings for cooking. The remainder will be of superior size and quality.

**Grapes.**—Remove all superfluous growth, and continue to pinch off the ends of bearing shoots, leaving four or five leaves beyond the clusters. This will save future cutting of the vine, and allow the strength to go to the fruit, and to promote vigorous growth of wood for future bearing.

**Herbs** contain most of their valuable properties when in flower. Cut when first blooming, and dry them in the



shade. Rub off the flowers, and keep them from the air in bottles or cans.

Hoe often to loosen the soil and destroy weeds.

**Insects**—Grubs, striped bugs and squash bugs are still troublesome and must be looked after. Visit the vines early in the morning, and destroy bugs by hand. Plant additional seeds about the hills of vines occasionally, to feed insects escaping observation; they will choose the young growth. These superfluous plants can be removed when the insects have gone. Salt sown upon land devoted to cabbages, say three or four bushels per acre, will, it is said, prevent the ravages of the cut worm.

**Lettuce**—Keep up a succession for the table by sowing, f, m, l. The Silesian variety is recommended for late use.

**Melons** for mangoes may be planted, ff. Hoe those planted early. Pinch off the ends of long straggling vines to increase the yield of fruit.

**Mushrooms**—Collect necessary materials for Autumn beds, m, ll.

**Onions**—Keep free from weeds, and the soil around them well lightened. Examine for the maggot and try sulphur or other applications to repel them. Experiments are needed to find a certain remedy. Sow seed, ll, for half grown bulbs (pips) to be set out next Spring.

Peas sown, ff, will be in season for late use, and less infested with weevil.

**Potatoes**—Harvest early varieties and devote the ground to turnips, late cabbages, or other crops.

**Preserving Fruits and Vegetables**—Commence with these as they mature, and continue through the season. For directions read article in this number, page 214.

**Radishes**—Seed sprinkled among corn, cabbages, etc., after hoeing, will give continued succession.

**Raspberries**—Pick daily as the fruit ripens. When the fruiting is passed, cut down old canes of last year's growth, and train the young sprouts to stakes or low trellises for next year's crop. Remove weak spindling shoots, leaving two or three of the strongest canes. If a further supply of canes is wanted, superfluous shoots may be left and removed in the Fall.

**Rhubarb**—Gather for preserving in bottles or for wine making. Many stalks near the center of the plant are still serviceable.

**Seeds**—Gather Turnip, Cabbage and other seed now ripening. Dry with care, and label for another year. Turnip seed of this season's growth will answer to sow now.

**Spinach**—Sow, ff, m, for late use. Allow a sufficient number of plants from early sowings to remain for seed.

**Strawberries**—The finest fruit is produced by culture in hills. Clip the runners as they appear, and keep the bed free from weeds. If beds need replenishing, mark out sections two to three feet wide, manure with leaf mold, and a little stable manure, dig it in deeply, and mix well with the soil. The rows left, will send out runners and cover the new sections. The older portions can be renewed in the same manner the following season.

Thin out all beds or hills where plants are crowded, and remove late setting fruit from vines.

**Tomatoes**—Train to trellises or upon frames. They may be supported by brush as for peas. Nip off the ends of the vines after sufficient fruit is set. Allow only so much as will ripen before frost, except where green fruit is preferred for pickling.

Transplant to fill vacancies in hills or rows. By observing directions given in previous numbers, any plant not too large can be removed with little injury.

Weeds are best raised by pulling them out of the ground; or *raze* them to the ground with the hoe.

**Winter Cherries**—If additional plants are wanted, take cuttings from those growing, and set the same as for transplanting. Shade and water moderately until they root.

### Flower Garden and Lawn.

The cool and dry weather of the last of May and first of June delayed the flowering season a little, but rains and the warm sunshine during the latter part of June have made ample amends and covered the lawn with a thick velvety growth, and the flower borders with a profusion of bloom. Perhaps no month in the year is richer in flowers than July. Some of the early plants have finished their blooming season, but there are many of the perennials still in flower, while the borders are gay with the bright colors of a host of annuals, if well kept, otherwise they give little pleasure to the owner or others. Not only will the flowers continue longer in bloom, but they will be far prettier if allowed ample space to develop themselves, and the ground is well stirred and kept free from weeds. A favorite plant can be kept in flower much longer than its ordinary period, by watering it frequently and shading for a few hours in the middle of each sunny day. A piece of muslin tacked upon stakes makes a convenient screen.

Everything is now growing rapidly, and especially among the trees and shrubbery should the knife be used freely. Almost any shape can be given to a tree or shrub by Summer pruning. A compact, stocky head is much better than a long straggling growth. Nip off the aspiring shoots and side branches will push out to form this desirable head. This pruning need not be confined to deciduous trees alone. Even evergreens are found to bear judicious clipping, not only with impunity but with manifest advantage.

Annuals of quick growth may still be sown, ff, to take the place of early blooming plants. The most of them will flower before frost, even if they do not ripen seed. They will also help to lengthen out the floral season.

**Bulbs**—Those which are to be reset, should now be lifted, dried, and put away in drawers or wrapped in papers and carefully labeled. It is not necessary to transplant them every year.

**Carnations, Picotees, and Pinks**—Layer, ff, m, selecting a rainy day or water the plants at the time of layering. Cuttings can also be put in at the same time. There should now be a fine show of bloom. Some of the flowers will incline to burst upon the side and give an imperfect bloom. This defect will be remedied by splitting the sheath with a knife, or clipping the top of the cap.

**Dahlias**—It is not too late to set out plants started last month in pots or otherwise. Prune side branches and firmly stake and tie tall plants. A single stalk is sufficient to leave in a place.

Evergreens make much of their growth in July, and are particularly ornamental at this period. No lawn or ornamental ground is complete without a collection of them, beautiful at all seasons and fine for the "Winter garden." This is the appropriate season to prune them. If to make stately trees leave the leader uninjured, but when desired to form shrubs, both the upright and principal side shoots may be pinched in to advantage.

Flower stalks are unsightly after completing their bloom. Cut them away unless seed is wanted, and plant annuals to occupy the space.

**Geraniums** are in full flower, and if well arranged, make a fine show. The Tom Thumbs answer admirably for bedding out. Both layers and cuttings may now be made.

**Gravel**—Keep free from weeds and well rolled. Pull out the weeds, or use the scuffle hoe. Some apply salt to destroy the weeds, but it requires too thick a coat. A machine has been invented which forces a jet of steam upon the weeds as it passes over them.

**Hedges**—The first clipping should be finished, ff. Cut evenly and to a line upon the top leaving them a little cone shaped. Do not trim from the sides near the bottom at this season, as the object now is to thicken the hedge. Thin places can soon be filled up by judicious pruning.

Hoe grounds often. Even if there are no weeds, the soil should be frequently stirred with a hoe or rake, to prevent crusting. Use a push hoe and walk backwards which will leave the weeds loose upon the top without any footprints.

**Insects**—Look after and destroy the rose slug as directed last month. The leaf hopper dislikes the odor of the soap mixture.

**Leaves and Grass Edgings** need shearing every fortnight during this rapid growing weather. Pare evenly, but not too closely and rake off at once.

**Layering**—This is a favorable month to layer many plants, vines, etc. The present season's growth may be used, and if put down early in the month, roots will probably be formed, and layers may be taken off another Spring.

Manure may be applied to the lawn, or to any plants which are not growing thriftily, by first dissolving it in water. Poultry droppings or guano, treated in this way, make a powerful fertilizer. Only one quart of guano should be used to 5 gallons of water.

**Potted Plants**—Some of these remain in their pots, and were only brought from the houses for a few months sunshine and fresh air. Whether sunk in the earth, or standing upon the ground, the pots should be turned around occasionally, else the roots will penetrate through the hole at the bottom and fasten into the soil. They will also require more water than plants growing in the open ground.

Prune freely, but judiciously. Remember the object now is to give shape and thickness, and to develop flower buds. Nip off frequently rather than prune seldom and heavily.

**Rhododendrons** are still in flower. Water freely and keep the soil well stirred about them.

**Roses** are still in full flower and fragrance. This is the proper season to bud and layer in order to change the variety and increase the stock. New growth, layered now, will root sufficiently to be removed another Spring. Keep pillar and climbing varieties tied to stakes, or trellis. Use the oil soap solution freely to destroy slugs and leaf hop-

pers. Even the rose bug evidently dislikes the odor. Prune those trained as standard or tree forms, and head back pillar and climbing sorts.

**Salvias** make a good show of bloom at this season. They can be pegged down and spread so as to form a dense mass of flowers.

**Seeds**—Collect any of the early varieties now ripening.

Stake or otherwise confine all tall growing plants liable to be broken down by high winds.

Thin plants requiring it, remembering that a shrub or flower can not fully develop itself when crowded. Beginners usually leave them too close.

Transplant the remainder of the biennials and perennials sown last month. Some of the annuals may be set out to take the places of flowers already faded.

**Verbenas**—These admirable bedding plants now show a mass of bloom if properly arranged, and spread by layering and pegging. The beauty is to have a mass of flowers and foliage hiding the ground beneath.

**Verbenas**—Increase stock of Fall blooming plants by layering.

Water any plants needing it during dry weather.

Weeds—Keep down by frequent hoeings.

### Green and Hot-Houses.

As most of the plants have been taken to the open grounds where the care of them comes more appropriately under "Flower Garden and Lawn," we have very few directions to give, relative to the houses. Some of the tropical and other plants over which it is needful to have perfect control, are still in houses especially devoted to them, but, for the most part these houses have both doors and windows open day and night, except during stormy weather. The glass of such houses should also be corrugated, or coated with some substance to break the direct rays of the sun. Frequent syringings and waterings will be necessary to keep the humid atmosphere suited to many of these plants.

Budding may now be performed upon many of the woody plants.

**Callas**—Repot towards the latter part of the month, watering less freely.

**Cissus**, and other trailing, or climbing plants should be arranged in suitable positions for training. They should be near the glass.

Cuttings of a large number of plants may be made, ff, m. Insert them at once in pots of prepared mold.

**Earth for Potting**—Provide a good supply and have it well mixed against a time of need.

**Grapes**—Some of the houses have already ripened their crops and the plants should be checked in growth preparatory to a period of rest. A dry atmosphere, and dryness at the root will soon check their growing. Those plants which have received less forcing will need some attention now. The ends of bearing shoots may require still further pinching in, and some of the clusters should be thinned again. Water and syringe freely. Use sulphur upon the first appearance of mildew.

Insects of all kinds need especial looking after now. The whale-oil soap solution will prove sufficient in most cases, although it may sometimes be necessary to resort to tobacco fumes.

Layer and inarch many of the woody plants to increase the stock, ff, m.

**Oranges and Lemons**, whether in or out of doors should be budded, ff, m. Water bearing plants freely, and thin fruit as may be needed.

Potting should be prosecuted vigorously during this month. Large numbers of the seedlings are now crowded for room. If possible, put them in pots of a blooming size at once.

Prune plants, ff, m, to bring them to a good form. In some of the plants the old wood requires cutting away to renew the growth.

**Seeds**—Gather any ripening, and save with care, or plant at once.

**Water**—Give copious supplies during the warm, dry weather of this month, sometimes both morning and evening. Wash freely with a syringe.

### Apiary in July.

BY M. QUINBY.

Nearly all of the best quality of surplus honey will be stored this month. Give close attention to the boxes. Do not neglect any stock or swarm that is crowded for room. Only a few days neglect now, may reduce the amount of surplus one half—bees will often continue to work in a box, while honey is failing, when they would not make a beginning at such time. All boxes should be removed as soon as filled, and empty ones put on in their places, as long as honey is being stored.—Combs

remaining in the hive after being finished, grow darker. If honey is abundant, and enough boxes are not furnished, the bees lose time for want of room. The boxes, when removed, should be placed so as to keep the combs perpendicular, otherwise the weight of honey may crush them. If the bees are getting honey abundantly, the boxes may be set a foot or two from the entrance to the hive, for the bees to leave them—keep from the hot sun. If honey is somewhat scarce, the bees will take away the honey left in this way. In such cases, the boxes as they are taken off, may be put in an empty barrel or box, and covered with a thin cloth; turn this over occasionally as the bees gather on the under side, they will easily be got rid of without much loss of honey.

In districts where foul brood prevails, all old stocks should be thoroughly inspected. No matter whether one or ten years old, or whether they have swarmed or not—examine all—if diseased drive out while there is yet honey to be had. Three weeks after the first swarm, is the best time for examination, as well as transferring, but do it at other times, rather than neglect foul brood. Look out for the moth worm in all weak colonies. Set shallow dishes containing sweetened water about the hives at night to trap the moth. Any stock or swarm, with too few bees to cover the combs properly, will be likely to be destroyed, or very much injured. When all the attention that you can give, is not likely to save the contents of the hive, it is best to secure what there is at once, rather than breed moths to infest other hives.

Queenless stocks can often be supplied after it is too late in the season to obtain cells from swarming hives, by introducing a small colony (one that could not prosper alone) with its queen. Sometimes you can not dispose of a colony from a diseased stock, better than to supply a queenless stock. Keep all colonies, young and old, strong, if possible; they are much less trouble, and safer from all their enemies.

### Scientific and Practical Talks About Manures....VI.

(Continued from page 167.)

*Muck, Peat, Swamp mud, and black earth*, are terms applied to organic materials found in greater or less quantity upon nearly every farm in the country. These substances are all valuable as fertilizers, and are eminently worthy the attention of cultivators. Muck, peat, and swamp mud, are similar in character. They consist of partially decayed vegetable fiber—mosses, leaves, stems, and roots—mixed with more or less of soil. The purest peat or muck is one that contains the least earthy matter. Peat and muck are very similar; and both terms are often applied to the same material. The word *peat* usually refers to deposits where the vegetable fibers are long and cling together with considerable force, so that the material can be cut into blocks, like hay in a well compressed mow; while the word *muck* is more particularly applied to deposits of vegetable matter in a state of fine division. Muck, when dried, can be broken or crumbled fine, but true peat must be cut into small pieces and rotted before it can be crumbled. By swamp mud, or black earth, is meant a mass made up of muck or vegetable fiber, rotted fine and mingled with a considerable quantity of soil.

The surface earth in forests is usually called woods mold, or simply mold. In old forests this is often nearly pure vegetable matter, being composed almost wholly of decaying leaves, but usually it is in part washed into and mixed with the surface soil. This is also a valuable fertilizer, and is highly esteemed by gardeners and cultivators of trees, plants, and flowers. It is this organic deposit that makes new land so fertile. For centuries, the trees gather from the air a large amount of organic matter to constitute the leaves, which annually fall to the ground, and being shaded they do not decay rapidly, but a portion is every year left, and partially protected from further decay by the new surface deposit of leaves. Few farmers are aware of the amount of fertilizing material they could add to their cul-

tivated fields by annually gathering all the leaves in these woodlands, and plowing them under, or what is better, mixing them with the manure. The leaves falling upon an acre of woodland, if gathered and composted with just manure enough to rot them, and then spread upon an acre of plowed land, would greatly enrich it, and pay a hundred per cent for the time and cost of gathering, and applying. The mold (leaves already partially rotted) should also be gathered. Successful gardeners, florists, and propagators of plants, who seek the best fertilizers, do not hesitate to gather this material and cart it many miles, to be mingled with loam in the preparation of a soil most suitable for their use. Let farmers take the hint, and go to their forests near at hand for fertilizers, instead of sending, or paying for sending vessels on a voyage of twenty thousand miles to Peru or the Pacific Islands.

Grass sods are similar in character and value to muck. The other day we asked an intelligent neighbor to sell us the privilege of cutting a lot of sods on an upland pasture. "No," said he, "these grass sods I find to be my cheapest source of manure, which is a scarce article. Whenever a piece of land is good enough to bear the operation, I take off a layer of sods and compost them with manure to be spread upon poorer fields." We could but admire his wise forethought.

But still more important are the peat and muck beds, which are accessible to three-fourths or more of all the farmers in the country. True peat is not so generally found, but deposits of valuable muck, or swamp mud, or at least of black mud or earth, are to be found on almost every farm. If there is not a swamp, there are at least low spots, where the water from higher ground has washed in and deposited black earth. These deposits may cover only a few rods, and be only a few inches in depth, but they will still supply many loads of organic material which should not be neglected, so long as there is a single field or garden plot not enriched to the highest state of fertility. The influence of a small quantity of organic material around the roots of a plant will be better understood when we come to speak, further on, of the mode of applying fertilizers.

On the fertile western prairies, there is a surface layer of vegetable matter, varying in depth from a few inches to several feet. Where there is too much of it, the land is too light for good crops, and prairie lands generally are improved by plowing deep enough to bring up and mingle with the surface some of the compact soil underneath. The effect may be injurious the first year, owing to the character of the soil, but it will be quite otherwise after air and frost have done their work upon the subsoil thus brought up.

There are muck deposits in the valleys of all uneven localities. They abound in New-England, and in these alone there are fertilizing materials enough to enrich the whole of that region for ages to come. The same may be said of many other similar localities, of moderate extent, over the whole continent. And these organic deposits are so numerous that they are usually accessible at small cost to those who have nothing of the kind on their own farms. The valleys of all rivers and streams which overflow their banks during part of the year, are more or less supplied with organic matter, frequently in such excess that a portion of it may be removed for use on higher land.

Let it be kept in mind, that all plants are composed essentially of the same few elements, and, consequently, that all materials produced by the

decay of plants of any kind are the proper food of all other plants. So all these black earths, produced by the decay of the roots, stems, and leaves of grasses, etc., are valuable as fertilizers.

*Treatment of Peat, Muck, etc.*—To be prepared for plant food, a substance must go through a process of decay; that is, its elements must separate from each other, so as to be taken up in minute portions by the small roots or pores. The reason why peat and muck remain undecayed is that the presence of water shuts out the access of air and warmth, both of which are necessary to decomposition. Further, after partial decay under certain circumstances, the vegetable fibers of peat and muck become coated with tannic acid, or with a species of asphaltum, or pitchy matter, which resists the action of the air, and prevents its access to the inner portions. The proper treatment then, is to place these substances where they will be exposed to air and warmth, and to apply an alkali (lime, potash, or soda) to dissolve the asphaltic coating.

A description of our own practice the present year will explain our theory of the best mode of treating muck. Two miles distant is a low swampy locality, where the black peaty muck is from two to ten feet or more in depth. In connection with a neighbor, we have bought some of this land, at a cost of more than \$100 per acre. The muck averages at least 3 feet deep, so that an acre will furnish fully 5,000 cubic yards, or one-horse loads, making the cost only about 2 cents a load, if we allow the land to be worth nothing after the muck is removed.

During the dry weather of July and August, a quantity of this muck will be dug out and removed to higher land. Some of the dryer portions will be taken to the barn yards and piled up under cover to be used as bedding, and to mix with the manure and absorb all the animal urine. While being piled up, a small quantity of lime will be intermixed, so as to partially prepare it for quick decomposition, when composted with the manure. When this addition of lime is made, a much larger quantity can be put in the compost heap, without checking fermentation, and at least five loads of it can be added to each load of manure in the compost heap, and thus there will be six loads of good manure instead of one. The absorption of urine and the retention of all escaping gases, together with the elements of the muck itself, will render the whole mass about as good as the manure itself would be without this composting.

Probably 31 cents per load will pay for getting out, carting, and liming the muck, making the cost only 33 cents per load for a good manure. This is one third the cost of the poorest yard manure, or street manure which is largely brought by the sloop load from New-York city to our vicinity. In most places the muck and lime can be obtained more cheaply than the above figures, as we have allowed for hauling it two miles.

Another portion of the muck will be mixed with a larger amount of lime—enough to decompose it—and left to rot, ready for application directly to the land as needed. It might be applied directly to warm soils, without lime composting, but its action would be slower.

We may add, that unleached wood ashes are quite as good as lime to mix with muck, where the ashes can be obtained cheaply. We have no accurate experiments to be governed by, but we estimate a bushel of good ashes to be worth quite as much as a bushel of lime. The ashes contain less alkali, but the alkali is mostly potash, which by reason of its solubility is more thoroughly diffused through the muck, and acts upon the whole mass.

When lime is used, it should be fresh slaked,



and in a powdered condition. It should also be thoroughly mixed through the muck. If only put in alternate layers, as some direct, it soon becomes carbonated from the carbonic acid in the air and that produced by the decay of vegetable matter, and the carbonate is insoluble. This, however, is in a measure counteracted, for the excess of carbonic acid produced during the fermentation, will probably change it to a soluble bi-carbonate of lime. When placed in a compost heap with manure, or lime, the muck should of course be damp, even wet, to promote the diffusion of the alkali, and the general fermentation.

In concluding this chapter, let us advise every cultivator who wishes to make his land more productive—and who does not?—to go muck-hunting over his land this very month—and if no deposits of black earth can there be found, to extend the search through the neighborhood, and buy a privilege in some muck deposit. Then, during this month and next, have a large supply of the material dug out and placed where it will drain out, and be accessible at all seasons. It can be carted and mixed with the manures in the stables and yards, at a time when the teams are at leisure.

We know a man who has a lot of pond mud, but it is always covered with a foot or two of water which can not be drained off, owing to high land on all sides. As soon as the water is at the lowest point in Summer, he has several men engaged with a large raft or flat boat. They dig out the mud with long shovels—sometimes standing knee or waist deep in the water with a plank sunk under them to keep from miring—it is then floated to a convenient place where the bank of the pond is a foot above the highest rise of the water, and the mud is then thrown up and left for future use in the barn yard, stables, and compost heap. He has pursued this plan for several years and finds it pays largely in increased crops.

Probably, in most instances where the ground is soft and miry, the better plan is, to throw the muck up into high heaps, and leave it to drain and dry until the ground is frozen hard, when the carting off can be readily done. The circumstances—the nature of the ground, the distance to be carted, the amount of spare man and team labor at any season, etc.—must determine the best mode of procedure in each case; but we say to one and all, lay in a large stock of peat, or muck, or pond mud, or black earth, during the coming dry season; and our word for it, you will get good returns when you apply it abundantly to your cultivated fields.

#### A Word for Buckwheat.

To the Editor of the American Agriculturist:

I have had great faith in Buckwheat ever since I was a boy and loved the smell of the fields where it was in blossom, and of the steam that came from the kitchen on cold frosty mornings when the cakes were baked and the door was opened to call us in to breakfast. I don't know what some of my neighbors would do without it. We live in a rather wet district and it takes our land until late in Spring to drain out enough to plant corn, except in fields where we have put in the pipes for it to run through, as the *Agriculturist* has recommended. When the season is very backward, it is of little use to try to put in common kinds of corn. It comes up as yellow as it was put in, and never gets over the jaundice enough to bear half a crop. I suppose it's owing to sleeping so long under a wet blanket, and feeding on cold sour stuff in the soil. Sometimes it happens that plowing can't be done until the

right time for planting is gone, unless one is willing to turn over a stiff wet soil that cuts like cheese, and falls in great dead lumps, which might answer for building walls, but are no better than bricks to nourish corn roots. So when a man gets behind the times for corn planting, or his yellow corn makes the prospect for a crop look blue, he waits until July and turns all such land over for buckwheat. I have thought this arrangement a little too convenient for thrifty farming, because some take little pains to push their Spring work ahead, calculating to cover up their neglect with a large patch of buckwheat: some farms in this neighborhood will be pretty well patched in that way this year.

But I find a good account in raising a few acres of this grain as a regular crop. It pays to manure the ground well and to work it deep before sowing. This is kept, like knitting work, to be done at odd spells between first and second corn hoeings in June, and whenever nothing else is pressing. During the last of June, or early in July, the ground is harrowed thoroughly, and the weeds are soon roasted out by the hot sun. Then, if possible just before a rain, I sow about three pecks of seed to the acre, harrow it in, and if the season is favorable, by the middle or last of September, there are twenty five or thirty bushels per acre to harvest, and sometimes even more than this. I think a crop or two of buckwheat, followed by corn, one of the very best remedies for Canada thistles, daisies, wild onions, and such troublesome weeds. The buckwheat starts so quick and shades the ground so completely, the weeds get discouraged, and a well tilled, hoed crop finishes them. Of course land so treated must be well manured—you can't get fat cuts from lean fields.

JONATHAN.

#### Legislating the Weeds Out.

On May 14th, the Montgomery (Pa.) Agricultural Society appointed a "Committee on Noxious Weeds," consisting of Charles J. Elliott, Alan W. Corson, and Thomas P. Knox. This Committee reported at a recent meeting, and there are two or three important suggestions, which we will extract:

"...We have had under consideration the propriety of asking the Legislature for a law, the provisions of which might be as follows, viz.: That all incorporated companies, such as railroad, turnpike, and canal, should be required to keep their roadways through cultivated farms clear of certain noxious weeds—viewing as we do these thoroughfares oft-times as nurseries of weeds throughout their whole extent.

Also, that it should be made the duty of the township Supervisors to keep the township roads free of such Weeds.

And that it should be made the duty of every rightful owner or occupant of property to keep from going to seed, and even eradicate all such weeds upon said grounds. For neglect of these duties the penalty might be moderate—say \$5 with costs."

[These suggestions seem very appropriate, and we do not see why the Committee should come to the conclusion, in the next paragraph, not to recommend any stringent measures at present. Are not farmers, everywhere, sufficiently enlightened to see the importance of at once preventing the growth and distribution of noxious weeds that are everywhere springing up along the lines of railways completed or being constructed in different parts of the country. Shall we "wait until the horse is stolen, before locking the door"—wait until the weeds are thoroughly established and propagated, before adopting stringent measures of prevention? A stitch in time will here save ninety nine. We com-

mend the action proposed above, to the early attention of all other Agricultural Societies, general and local.—Ed.]

"But while your Committee themselves may be fully satisfied of the legality and sound policy of such laws at some future time as would have a tendency to eradicate the most offensive weeds, we are scarcely prepared at present to recommend any stringent measures, until it is thought an enlightened state of agricultural knowledge had prepared a public sentiment necessary or proper to enforce their observance. Our Agricultural Societies and Journals are fast preparing the minds of the people for such measures as may prove partially effective.

In the meantime, we would most earnestly recommend that every agriculturist take early and most efficient steps toward eradicating all plants not properly the subject of cultivation. Webster defines a weed to be a "plant out of place;" although in the economy of nature some of them are of use medicinally, we cannot but regard them as *out of place* upon our cultivated farms.

We would recommend that no farmer permit a Weed, under any circumstances, to go to seed upon his property. Before and during hay-making, see to it that no Weed in even a half ripe condition be so placed that the substance in the stalk or body of the plant may, in the barn or elsewhere, cause the seed even partially to ripen or mature. We are well satisfied that many, very many weeds, which at mowing, in their unripe condition, we consider not likely to give us annoyance, are thus taken to the barn in the new made hay, ripen in the mow, pass through the stables and manure heap, and are returned to the field, where in time—immediate or remote—we are astonished to find them in abundance, and wonder whence they came. We are assured by careful Weed pulling farmers that they can, in no other way than this, account for the present abundance of that most pestiferous Weed, the Moth Mullein.

Very many farmers are in the habit of hauling hay to the city and boroughs and bringing in return a load of manure. Any one observing the vast quantities of Ox-eye Daisies throughout Philadelphia county, and now spreading and steadily advancing upon us in the lower part of Montgomery county, need not be surprised in a few years to see us thus completely overrun with said Daisy and other Weeds, from such a source and cause.

We would advise farmers to be careful, most careful, in the selection of their grass seeds, particularly Clover and Timothy. The sowing of impure seed we regard as the chief cause of the spreading of noxious Weeds, and we may, with great propriety, examine carefully our parcels of seed from the Patent Office—many of them are impure.

Your Committee are of opinion that, although the common Rag or Bitter Weed is regarded by many with but little prejudice, it must necessarily be very exhausting to the soil. There probably is no Weed so generally abundant. We are of the opinion that, if farmers would be more careful in keeping the headlands of their corn fields and open fields or grounds generally, free from them during the Summer and busy season of harvest, they would effect much toward their diminution...."

#### Potato Rot—Planting Small Tubers.

To the Editor of the American Agriculturist:

Though I do not profess to be a farmer as my practical experience in this department is confined to three fourths of an acre, yet on this I have made some experiments particularly with the potato. Formerly I followed the common practice of using small potatoes for seed. While this was continued, a large portion of the crop was diseased. I then tried using none but full grown and ripe potatoes. Some of these were cut and two or three eyes planted in a hill, others were put in whole. None of those raised from such seed have been affected with the rot. A few days since while visiting a relative in Westchester Co., N. Y., he informed me that his experience coincided with mine. The reasons he

gave were that small potatoes having been checked in their growth, before fully ripening, though they possessed the germ of life, were weak, and sickly, and communicated disease to their progeny. In other articles of produce the best are selected for seed, even at the expense of importing from a distance. If small kernels of corn, wheat, or other grains are unfit for seed I see no reason why the same is not true of potatoes. Will some more experienced agriculturist give the results of their own practice?

FAIRFIELD CO., CT.

CHAS. F. RAYMOND.

**REMARKS.**—It is quite doubtful whether the potato disease results entirely from the cause suggested by our correspondent. As in all diseases, weakly plants are most liable to suffer, the use of partly ripened seed may predispose the progeny to the rot, even if it do not cause it. The produce of inferior kernels of grain is usually inferior, but no special disease prevails in consequence. With the potato there is an actual malady whose causes are not fully known, but every thing which tends to give vigorous growth will aid in resisting it. For this reason we should advocate thorough drainage, high cultivation, and the use of the best tubers for seed, as practiced by Mr. Raymond.—Ed.

### Experience in Underdraining.

[We believe thorough underdraining invariably pays well, on comparatively dry upland as well as upon that which is low and swampy, and this, too, let the draining cost what it may, within reasonable limits, of course. We have expended as much as \$50 per acre in draining land not considered wet by any means, and we firmly believe it would have paid a good profit on the investment had the draining cost \$100 per acre. For illustration, suppose a field in its ordinary condition will yield an average of 40 bushels of corn per acre. Drain this field, and there is hardly a doubt that the average would be raised to 60 bushels, with no increase to the cost of cultivation. All experience has proved that this estimate is not too high. Call this corn worth only 37½ cents per bushel, and the increase of 20 bushels per acre will be \$7.50, or 15 per cent on the investment of \$50 in draining. But our object now is not so much to discuss the profits of draining, as to introduce the remarks below from a recent contribution by W. J. F., to the Rural New-Yorker, in which he gives the result of his own experience in regard to the art of draining. He states that since 1855 he has put down an aggregate of 3½ miles of drains, and feels prepared to "talk like a book" on the subject. We think his estimate of the expense too low, to be a guide in general practice, but he certainly shows that the expense is not so great an obstacle, as is frequently supposed.]

We think a great misapprehension prevails in regard to the cost of making under drains,—it being generally considered more expensive than it really is. We know it has not cost us as much as we expected; and as many others who admit the importance of draining, may be deterred by its supposed expensiveness, we deem it essential to the cause of farm "Progress and Improvement," that this matter should be set right. We have seen estimates of the cost of draining in which the ditches were run through the field at the uniform distance of two rods apart, and the cost, at fifty cents and upwards per rod, was made to amount to \$40 or \$45 per acre. No wonder that at this rate the expense of draining has been made a stumbling block, and the great bug-bear to frighten farmers from farm improve-

ment. We protest against any such calculations, for it is scarcely possible for even the most thorough underdraining to cost nearly so much.

In the first place, even on low, wet land, drains do not need to be placed so near as two or even three rods apart. A good drain should drain from two to three rods on each side, according to its depth—(the deeper the drains, of course the further on each side they will dry the land.) We find that drains three feet deep will drain the land from two and one half to three rods on each side, or five or six rods wide, while two feet drains will only drain half that width. But with a retentive clay subsoil, the deep drain is little better than the shallow one, and it is better to make them little more than two feet deep, of course placing them nearer to each other. When the subsoil is moderately porous, drains should never be made less than three feet deep, (of course taking care to secure a good outlet,) and we have made some nearly 4½ feet, filling in two feet of stone, in order to get them out of the way. Taking four rods apart as sufficiently close to secure dryness of low, flat land, we find 40 rods of drains per acre. On much of our rolling land they will not be needed, except between the gentle rises of the ground. On much of this kind of land 20 or 25 rods per acre, or even less, will make the ground dry enough for all practical purposes.

Now, then, as to the cost per rod. Drains are frequently dug by the job, at 12½ cents to 18½ cents per rod, and even higher, according to depth and the hardness of the ground. As they are generally dug, 18½ cents is a fair average price. But this is by no means the cheapest way to have ditching done. There are various drain diggers, patented and in operation, but we are not acquainted with their working, having never seen any operate. But where these can not be tried, the common *plow* is a good substitute, and should always be used. By plowing two or three paces from the center of the proposed ditch, turning the furrows out from the center, a dead furrow can be made ten to fifteen inches deep. It would be advisable to let the plow in several inches deeper the last two or three furrows, though we have seldom done it. Where it is not sward land, in which case it would of course be impracticable, this process should be repeated, plowing a little wider than at first, by which five or ten inches more may be loosened—making, when the loose dirt is cleaned out, quite a respectable ditch, from eighteen to twenty inches deep. In a dead furrow, thus deepened, a man can dig one half more, to the depth of three feet, than by beginning at the surface.

What we have done on the farm at draining has mostly been at parts of days, seldom a whole day at a time; but we have hired a good deal done, at \$1 per day, and find from eight to ten or twelve rods per day a good day's work, varying according to the hardness of the ground. Sometimes we have had fourteen or fifteen rods dug in a day, three feet deep; but it was very easy digging. Taking ten rods as a good day's work, in ground well plowed out, and it will average 10 cents per rod, for three foot ditch—merely for the cost of digging. We say nothing of cost of plowing out the ditch, as it is but a trifle, and much more than re-paid generally by the benefit it affords to the soil.

Next, as to the cost of material. If stone are used, it is difficult estimating the exact cost; in fact, they generally cost nothing, except the labor of procuring and laying them, and this varies so much that each farmer must, of necessity, make his own calculations as to the expense. Two-

inch pipe tile can be obtained in Rochester at \$10 per thousand, or one cent apiece. These are large enough for the great majority of drains—for all, in fact, except the main drain, into which the others empty. As thirteen will lay a rod, the cost of the ditch, excepting laying and filling in, is only 23 cents per rod. Where the bottom of the drain has been smoothed so as to remove all inequalities, (for which a narrow hoe is convenient,) the laying of the tile is very quickly performed. Care must be taken to prevent the depression of the tile in the soft places, for if a tile sinks below the others it will, in time, fill up so as to leave no room for the water to pass through. A spirit level and a long narrow board, of uniform width, are also very useful where the ground is almost level, in order to see that there is a uniform fall. Two inches fall in fourteen feet is plenty—but one inch, or even less, will do, provided it is uniform.

In filling in the ditch, a little straw should be thrown on the tile in order to keep the loose dirt from running in at the joints, before it gets settled. Some prefer coarse gravel for covering the joints of the tile, and where it can be easily obtained it may be well to use it; but straw will do very well. We have used each with good results. Then throw in a little dirt to prevent the tile from being broken or misplaced, and plow in the soil again. It is no matter if some of the yellow dirt from the subsoil remains on the surface. It will soon be as good as any, and we think a little better for wheat.

You have now a ditch completed, (three feet deep,) at a cost, (allowing two cents per rod for laying tile and filling in, which we think is enough) of only 25 cents per rod. We can aver that the cost of our ditches, with two inch tile, has rarely exceeded this, and on easily digged ground has often fallen below it. So the cost of thoroughly draining *wet* land—drains four rods apart, or forty rods per acre—is just \$10; and on much of our land where wheat *almost always* winter-kills, the soil can be made dry enough at a width of twenty rods, at a cost of \$5 per acre. Those who have thought draining too expensive to pay, will see that it is not impossible for two crops, or even one, by their increased value, to more than pay all the cost of draining the land. We are quite certain it frequently does. But draining is a *permanent* investment, and it is not fair to charge one crop with all the expense. The *real* annual cost of this draining, costing \$5 or \$10 per acre, is 35 to 70 cents per year.

### "Thorley's Cattle Food"—Is it worth the Price asked for it?

During a year or more past, our city and neighboring towns, as well as many distant points, have been overrun with flaming handbills, calling attention to an article imported from England, entitled "Thorley's Cattle Food." We have observed that it is even more extensively advertised in England, than here. The mode of advertising, both there and here, is very ingenious and "taking," and the article has attracted not a little attention.

As a matter of public interest, and to be able to answer a great number of inquiries, we have been desirous to ascertain something of the probable value of the article, and we have experiments now in progress. As it is an organic compound, it is somewhat difficult to make an accurate analysis that shall give exactly the materials used in its composition. Like many of the so-called "patent pills," it is not patented



for this would require a public record of its actual composition.

Having learned from several reliable parties who have tried it, that horses and neat cattle fed with it, seemed to exhibit more plumpness of form, and sleekness of coat, our first impression was, that it contained arsenic, or antimony, both of which articles, when fed in small quantities, at first favorably affect the appearance of animals. But we will do the manufacturers the justice to say, that we procured samples from headquarters, and without their knowledge had these submitted to thorough qualitative analysis, by the first chemists of the country, without discovering a trace of either arsenic or antimony. We are glad to find this to be the case, for however great or little value the article may have, it is a relief to know, that it is not positively poisonous.

But will it pay to buy this article to be used as a frequent and constant food for cattle? So far as we have examined it under the microscope, and by chemical tests, it appears to be a mixture of nutritious articles of food—perhaps beans, barley, flax seed, etc.—with which is combined a small quantity of coloring matter, and some tonic medicine. The "tonic" may sometimes, even frequently, render it useful to animals, just as "Peruvian Bark," quinine, and other tonics are useful to men. But no one would recommend every man, sick or well, to use tonic medicines daily and constantly.

That this food is nutritious, even highly so, we will not assert or deny; but allowing it to be nutritive to the highest degree, we should want much greater evidence than has yet been furnished by experience, observation, or analogy, to warrant us in paying 12 to 14 cents a pound (the price of beef steaks) for an article of diet for animals.

In the English Agricultural Gazette for March 14, page 272, we notice a communication, signed by "Old Bird," (one not to be caught with chaff,) which we suppose refers to the article under consideration. The writer says he has been favored with a circular of —'s new cattle food, and the analysis by Dr. Letheby; and he proceeds: "I find the mixture consists chiefly of cereals (grains) and Leguminosæ (peas, beans, etc.), and contains about 80 per cent nutritive matter, viz.:

Nitrogenous matter.....12.1 per cent.  
Carboniferous matter.....68.1 per cent.

"From this data it is not difficult to ascertain its actual value. Mr. Spooner states the value of nitrogenous matter to be £20 (about \$100) per tun of 2240 lbs., (or nearly 4½ cents per lb.); and of carboniferous matter at £12 (\$60) per tun, (or nearly 2½ c. per lb.)" With these figures before him, "Old Bird" puts down the value of this "new cattle food" at about \$53 per tun, or less than 2½ cents per lb., while it is there sold at £36 (\$180) per tun, or 8 cents per lb.

The writer then gives the estimated value of linseed cake, (the common oil cake, left in expressing oil from flax seed) which by the analysis of Johnson, contains say 764 lbs. of nitrogenous matter, and 875 lbs. of carboniferous matter in a tun (of 2240 lbs.), making the cake worth a little over \$57 per tun, or about the market price for it in London. According to Dr. Völcker, chemist to the Royal Agricultural Society, a mixture of equal parts of barley, beans, and oil cake, contains in a tun 509 lbs. of nitrogenous matter, and 1162 lbs. of carboniferous matter; and this mixture (of barley, beans, and oil cake) is, therefore, worth nearly \$54 per tun, or a trifle more than the same weight of the "new cattle food." "Old Bird" thus sums up: "It is evident, therefore, either linseed cake at its present value (£11 per

tun), or a mixture of equal parts of barley, beans, and linseed cake, at the present price contains more nutritive matter, than a tun of the cattle food. If you add to your own mixture the cost of grinding, etc., still you may be satisfied that your own combination of substances (containing a far larger portion of nitrogenous matter,) stands you at barely one-third the cost of the new cattle food. Practical men of business consider these things, and are not caught and made to pay the forfeit of the inexperienced."

In a more recent number of the Agricultural Gazette, we find an editorial referring to the above, which we will republish entire, as it embodies about what we should say on the same subject.

"We have received a letter from a London firm, makers of a new cattle food, who believe that they are referred to by 'An Old Bird' in a paragraph published on page 272. They allege that our correspondent is mistaken in imagining from Dr. Letheby's analysis that he has ascertained the cost of the article which they manufacture. On the contrary, they could tell him something about a large percentage of waste, about a costly commission agency, about expenses of London premises, labor, carriage, printing, and advertising, of which he seems to know nothing. 'Besides, as a physician claims his guinea for writing a prescription, so we fancy our invention, which has cost us some labor and expense, is entitled to a profit.'

"Now, if an 'Old Bird' is to be misled by such reasoning as this, he has no claim whatever to the signature which he has adopted. What is it to him or to any one who may wish to try this cattle food, whether the process of its manufacture be costly or not; the only point for his consideration is, whether or not the article offered be worth the price asked for it. To that end let him try it if he chooses. But as this involves considerable expense, it is perhaps reasonable in the first place, to ask the chemist what the food contains. Dr. Letheby is accordingly consulted, and he says, so our correspondent alleges, that 12.1 per cent of the food is 'nitrogenous matter,' and 68.1 per cent of it is 'carbonaceous matter.' Now, Mr. Spooner says that the nitrogenous matter of any nutriment may be had in most foods for £20 a tun, and that the carbonaceous matter of any nutriment may be similarly had for £12 a tun.

"If these data be correct what can be easier than to ascertain the value as a nutriment of the new cattle food in question? This accordingly has been done, and our correspondent, finding that the article comes out of this arithmetical examination worth £10 11s. 9d. a tun, whereas the manufacturers ask £35 a tun for it, declares he is not to be caught, and very properly signs himself 'An Old Bird.' The manufacturers may be losers or they may be gainers, that is nothing to him. If they can offer in their food these two classes of nutriment at a smaller price than he pays for them in beans or linseed-cake, he will gladly be a customer, but seeing that they offer them at more than three times the price for which he can procure them elsewhere, he is wise enough to decline the offer, and good enough to point out the snare to others.

"Let any manufacturer of a new cattle food buy beans and linseed, lentils, cake, etc., and mix a little salt and grind them up so as to be immediately available for use in the feeding house, and farmers will pay him handsomely for his labor. The division of labor principle is economical, and therefore profitable for all; and there can be no reason why the grinding of food for cattle should not be a business as much as the grinding of food for man. But if any one, as we believe that many do, justifying themselves by the expenses of London management and by the cost of some mysterious condiment which they use in their manufacture, shall offer his manufactured food at three or four times the cost of the only nourishing ingredients it contains, certainly we shall not help him to a customer."

With our present light on the subject, we are forced to agree with our London cotemporary. We believe, our farmers can not afford to pay the profit required by the manufacture and im-

portation of an article from London, together with extensive advertising, etc., for nutriment, which they can obtain at a fourth of the cost in other forms. Beans, barley, and oil cake, are cheaper here than in England, and to buy and mix them in England to be brought here, is "bringing coal to Newcastle." Give horses and cattle a due supply of nutritious food, barley, beans, and oil cake, if you like, but mix and grind them yourselves, instead of purchasing them at three, four, and five times their value, because mixed by others. If animals are diseased or weak, give them tonics when needed, but do not force them to eat medicines daily in the form of "cattle food."

### Agricultural Inventions for a Single Year (1859).

We were never more forcibly impressed with the rapid improvement now taking place in all that pertains to the cultivation of the soil than when this morning we took up an advance copy of the Patent Office Report for 1859, (kindly furnished by H. McCormick Esq., ch. Agr. clerk) and turned to the list of patents granted during one year in the single department of Agriculture. An hour or two spent in classifying and counting the various inventions and discoveries, gave us the following results, viz:

There were patented during 1859:

Agricultural Implements of all kinds.....	659
Seed Planters; 30 designated as corn planters; 34 as seed planters; 42 as seeding machines; 10 as cotton seed drills; and 1 potato planter.....	117
Harvesters, including 9 for cutting corn and sugar cane, 3 for harvesting cotton, 2 for digging potatoes, and 1 for gathering beans.....	113
Cultivators.....	58
Plows, including 5 Steam Plows.....	43
Churns.....	42
Grain Separators.....	26
Horse Rakes.....	24
Straw Cutters.....	21
Harrows, including 13 Rotary Harrows.....	20
Bee Hives.....	14
Sugar cane mills.....	13
Improvements in sugar manufacture.....	13
Mills for grinding Corn.....	9
Cotton Gins.....	9
Potato Diggers.....	8
Threshing Machines.....	7
Corn Huskers.....	6
Cotton Seed Hullers.....	6
Machines for sowing fertilizers.....	6
Machines for cutting and binding grain.....	6
Vegetable Slicers.....	6
Fertilizers.....	5
Cotton Seed Cleaners.....	4
Hop Frames.....	4
Hay Making Machines.....	4
Mowing Machines.....	4
Cheese Vats.....	3
Ox Yokes.....	3
Spading machines, including 1 Steam spader. Two of each of the following: Butter working, Clover (seed?) hulling, Grain fans, Grain weighers, Weeding Hoes, Machines for milking, Cider Mills.	3
One each of machines for making "Pearl barley," Cleaning animals, Corn cribs, Machine for Making Drain Tiles, Flail caps, grain bin, grain cradle, grain dryer, grain shovel, grain hulling, hay manger, plant protector, field roller, scythe snath, machine for smoothing walks, pitch-fork, pea-vine trellis, and machine for girdling and felling trees.	

Here are 659 inventions designed to facilitate the work of the cultivator of the soil all brought out in one year. Other years are similarly productive. It is true that many of these inventions do not turn out to be of special value either to the public or the inventors themselves; but there is originality enough in each of them to warrant

careful government examiners in giving a patent. And it is not to be doubted that a considerable proportion of these new implements, and additions to old ones, are real improvements which will facilitate human labor, and lessen toil.

### The Cattle Disease—Treatment.

Almost the entire country is excited by the reports of the cattle disease prevailing in some parts of Massachusetts. Indeed, it just now seems as if the disease had suddenly sprung up in all parts of the country. In the present excitement it is impossible to arrive at any definite opinion as to the nature and extent of the disease. During a dozen years past, we have from time to time heard of single animals, here and there, which, from the descriptions received, seemed to be affected similarly to those now diseased in Massachusetts. We are almost daily receiving reports from New-Hampshire, New-York, New-Jersey, Pennsylvania, Ohio, etc., of local diseases among cattle, which are apparently of a similar character. Whether the disease be the same, or one of the same general type, or whether fear and imagination have aided in making out an analogy, it is not possible yet to decide. We present here a *diagnosis*, or description of the symptoms of the disease, as it exists in Massachusetts, adopting the language of the report to the Legislature by Messrs. E. F. Thayer, Veterinary Surgeon, and George Bates, M. D.

#### DIAGNOSIS OF PLEURO-PNEUMONIA.

"If the animals are at pasture at the commencement of the disease, they will be found, early in the morning, separated from the herd, with arched backs, hair rough, and refusing to eat; while, as the day advances, they will join the rest, and appear to be in usual health.

A slight but husky cough will be occasionally recognized; and, at times, the breathing will be increased, as if the animal had made some extra exertion; and in milch cows there will also be a diminished amount of milk.

As the disease progresses, the cough becomes more frequent and husky; the respiration is humid; the pulse increased and somewhat oppressed; the appetite diminished; rumination suspended; bowels constipated; surface of the body and limbs cold; the skin rigid and almost immovable over the ribs; the animal, upon pressure upon the spine, flinches, and is unable to bear pressure or percussion on the sides of the chest or costal regions (or ribs).

In more advanced stages the respiration is difficult, labored, and painful. The animal frequently lies down; and when standing, the head is protruded, the mouth covered with frothy saliva, the muzzle cold, and the aspect spiritless and haggard.

On percussing (striking) the affected side, a dull or dead sound is usually elicited to a greater or less extent, but this will depend upon the extent to which the lung has become consolidated, and the presence or absence of fluid in the cavity of the chest. On applying the ear to the sides of the chest, one or the other is found to be affected; sometimes, though rarely, both are implicated. When applied in the region of the diseased part, the ear fails to perceive the low, rustling murmur of healthy lungs, and detects a crepitating sound or rattle, which, as the case advances towards an unfavorable termination, becomes duller, and, at last, is altogether inaudible.

An examination of animals which have died of Pleuro-Pneumonia, will present various appearances. The lungs of the same animal will

show all the different stages of the disease;—red hepatization, dark spots, and an effusion of serum...."

The above description of the disease, as found in Massachusetts, which corresponds with the symptoms given by English authors, will enable most persons to decide, whether any animal is affected with the same or a similar disease. The following letter, from a well-known gentleman, who has had much to do with cattle, will be found interesting and instructive to those who may have diseased cattle. The treatment recommended is a good one in any case, for a disease of the lungs, and if it does no good, it can do no harm. The immediate separation of a suspected animal from all contact with other animals, should not be overlooked.

FORDHAM, Westchester Co., N. Y., June 14, 1860.

To the Editor of the American Agriculturist:

At your request, I give briefly my experience with the *Pleuro-Pneumonia* or "cattle disease." During many years past I have from time to time had animals affected with a disease very similar in every respect to that now attracting so much attention in Massachusetts and elsewhere. I think the disease has been more or less prevalent in various parts of the country for at least fifteen years past—its virulence depending upon local causes, weather, etc.—and now that public attention is attracted to the subject, we shall doubtless hear of it from all sections, probably in every one of the older States. Formerly it was confined somewhat to dairy herds, and it being to the interest of the milkmen to keep the matter quiet, little was said upon the subject in the public prints. You have doubtless received many individual letters, describing single animals affected, and asking prescriptions. [We have. Ed.] The disease appears to be among cattle, what consumption is among men—similar in character and effects, but less general, and more easily overcome.

In former years the animals in my own herd, and in the herds of my neighbors, rarely recovered after the disease became seated upon them. Our treatment then was bleeding and physicing. But during the past Winter, a few cases of the disease appearing, we adopted a different mode of treatment, and though the animals were as badly attacked as in former years, we have succeeded in restoring every one to perfect health.

Our treatment is this: As soon as an animal appears diseased, we separate it from other animals, and place it where it will have plenty of air, but be sheltered from cold storms and from hot sun—in short, give plenty of pure air, and a cool but uniform temperature.

No medicine is given internally, except first-rate diet in small quantity. Ground oats, with a trifle of good hay or pasture, we have found best. The animal will seldom eat but a small quantity of oat meal, and this being nourishing, and not hard of digestion, gives "good heart," and consequently more ability to resist and throw off disease.

Externally we get up a counter-irritation over the region of the lungs. To do this, we apply the common "blister salve," or Spanish flies. It is made as strong as possible by the usual methods of the druggists. The hair is shaved off for about the size of the whole hand on both sides of the animal, just back of the fore-legs—not too high up the sides. The blister salve is then strongly rubbed into the skin upon the shaven spot. The sores are allowed to run for a day or two, and then dressed with sweet oil or lard. With us, one blistering has answered in every

case, but should an animal be very bad, I would recommend a second blistering, if necessary, after the first has commenced to heal.

In regard to the disease being contagious, my opinion is that where animals come directly in contact, as when they stand side by side in stalls, or come together in yards or pastures, the fetid breath from one animal may be inhaled by another, and become the seed of disease, if the health and vigor of the animal be not sufficient to resist and throw off its effects.

CHAS. W. BATHGATE

### Artesian Well at Columbus.

In April last we published an inquiry concerning the Artesian Well at Columbus, Ohio, which had been reported as 2,300 feet deep, and the deepest in the world. Several subscribers have responded. We are indebted to R. Hume Esq., Secretary of the State House Commissioners, in Columbus, for a copy of their official report containing a complete account of the work and many other details, from which we extract several items of interest.

The work was commenced in July 1857, being undertaken to procure a permanent supply of water for the new State House in the process of erection at Columbus. From observations made on similar works in various parts of the world, and judging from the supposed character of the strata of rock underlying that section of the country, scientific men were of opinion that a permanent supply of water could be obtained at from 100 to 600 feet in depth, and at an expense of from \$2000 to \$6000. In the first experiment the boring reached 110 feet, but was abandoned, quicksand entering the shaft in such quantities that it could not be excluded by tubing. A second shaft was sunk 122 feet, but it was also abandoned from the same cause. Nov. 4th 1857, a third trial was commenced, and continued successfully until Oct. 15th 1859, at which time a depth of 2340 feet was reached. The work was then suspended, the appropriation therefor having been exhausted. Application was made to the last Legislature for additional funds, and in view of the important scientific facts brought to light during the progress of the work, as well as, if possible, to secure the end originally aimed at, \$3000 additional were granted. The work was resumed on May 7th, and on the 28th, the date of Mr. Hume's letter, they were boring at the depth of 2388 feet, and progressing downward at the rate of four feet per day. At a depth of 149 feet, a vein of water was struck which washed away the borings for nearly a hundred feet below, and rose within 22 feet of the surface. It is thought an abundant supply of water may be had by pumping from this vein. At 180 feet sulphur water was obtained. At 675 feet the water became quite salty, and has continued so down to the deepest point reached. Thus it is probable that even if water finally comes to the surface, it will be unfit for ordinary use. But the important information gained concerning the deep seated strata of rocks, it is thought, justifies a continuance of the work.

Some of the deepest Artesian wells are as follows:

At Grenelle, Paris, France, 1794 ft. The water from this well rises 40 to 50 ft. above the surface, and discharges six hundred gallons per minute.

A well in the Duchy of Luxemburg, is 2336 ft. deep, one at Charleston, S. C., 1145 ft., at St. Louis, Mo., 2199 ft., at Louisville, Ky., 2086 ft.



### Who Invented the Mowing Machine?

Not the machine as now improved, and sweeping down a whole harvest in a day, but the instrument as first devised and patented. If a writer in one of our cotemporaries speaks correctly, the honor belongs to a Mr. Enoch Ambler, of the town of Root, Montgomery Co., N. Y. A patent was issued to him, Dec. 23d, 1834, for "a machine for cutting hay or grain." We can not now go into the particulars of his invention, but those who have examined the descriptions of the original patent, affirm that it contains the essential features of all the machines since made.

The modifications and additions since attached by other patentees are certainly of great value, but if there is any special honor due to one who strikes out an original idea of great practical value to the public, it surely belongs in this case to Mr. Ambler. We understand that he is a plain wagon-maker, in moderate circumstances, having never received much profit from his invention; that his own patent expired long ago by limitation, and that he derives no benefit from the sale of the many machines based on his invention. Let him at least have the honor justly due. \*

### Improved Horse Power Pitchfork.

Every man who has pitched a load of hay over the "big beam" on a hot Summer day will, we think, study the accompanying illustrations with pleasure. No more tugging to loosen the fork-full from the load, no more lifting and straining to raise it so as to clear the beam, but simply to ride a horse back and forth, and guide the direc-



Fig. 1.

tion of the great masses of hay which are so easily deposited in their place. The wonder is, that so desirable an arrangement has not long since come into general use; inventions of the kind having been made several years ago. In some sections they are already adopted. A Pennsylvania farmer said to us last year, "a man is considered behind the times in our section who unloads hay with the hand pitchfork."

The implement here shown, manufactured by Herald & Tompkins, Tompkins Co., N. Y., is the simplest we have seen. Fig. 1 shows the construction of the fork. It is made with four, heavy, steel tines, the two middle ones sixteen inches, and the outer ones fifteen inches long. These pass through a hollow cast iron head, *h, h*, and are fastened by nuts screwed upon their upper ends. They are made of unequal lengths, to



Fig. 2.

enable the operator to work the fork into the hay more easily. Two staples, *s, s*, cast solid with the head, receive the hooks by which the fork is attached to the hoisting rope. The handle *a*, merely a stout straight stick, is inserted in a hollow projection of the head, *h, h*. It is five feet long, only part of it being shown, to save space. A light rope is attached to its upper end, by which the operator holds the fork in a position to retain the hay while being elevated.

The manner of working is shown at Fig. 2. The rope *g* attached to the loaded fork, passes through three pulleys, viz: *b*, hung from the second or third rafter from the large beam; *c*, attached to the plate; *d*, fastened to the foot of the post at the side of the doorway. Boards, *e, e, e, e*, to the width of eight feet, standing on the floor and inclined against the large beam, *f*, allow the hay to slide up easily by the side of the mow, and over the beam. The workman on the load, enters the fork, and depresses the end of the handle, and keeps it in this position by the hand-rope, *h*, until the horse has drawn it up over the mow; then by slackening the hand-rope, the hay drops by its own weight, and the horse is backed to lower the fork for another portion. A load can thus be easily taken off in much less time than by hand pitching. The price for fork, pulleys, ropes, etc., complete, we believe is twelve dollars.

There are several modifications of these horse-pitchforks. We saw a very good one on exhibition at the N. Y. State Fair, last Autumn, which is made in Pennsylvania, in Bradford county, we believe, but we do not recall the manufacturer's name. This has a hinge between the fork and handle, which can be thrown out of gear with a hand rope when the hay is elevated, making it very convenient for use, especially in a small space. The one here shown is very good for ordinary purposes. Any one of these horse-pitchforks will be found a great labor-saving, time-saving, and expense-saving implement.

### Overdoing.

Some men—young men especially—are proud of great feats of strength and endurance. They are not satisfied with ordinary labor faithfully performed; they must be doing some wonderful thing to excite attention and secure praise. Such men may be good enough in their way, but are not generally the most useful in society. For all ordinary purposes, they are apt to be lazy, and vain, and unstable.

In the playfulness of youth, or the vigor of early manhood, it is natural for one to love to try his strength or his agility, just for the fun of it. Ordinarily, no harm comes from such per-

formances; yet we must be allowed to say, be careful in your gymnastics. Not a few young farmers and mechanics have, by the excesses of a single day, laid the foundations of disease or infirmity for a whole life. In the present season of haying and harvesting, a word of caution here may be timely.

Young men, don't be ambitious to do a great day's work. At all seasons of the year, more will be accomplished by doing regularly a fixed and moderate amount of work, than by overtaxing yourself at any one period. The work will be better done, and you will be likely to live longer to enjoy its fruits.

### Shall I Buy a Mower?

To the Editor of the American Agriculturist:

Would it be true economy for a farmer that cuts but twenty or thirty tons of hay to make an investment in a mowing machine. The view I take is, a machine would save the labor of hand mowing. Good mowers being scarce and their wages high, I could hire a cheaper set of hands to take care of the grass if it was cut with the mower. A farmer hires a gang of hands for the haying season, who can cut as much grass in the morning while the dew is on, as they can take care of during the day, and this is all that could be done with the mower, for it would not do to get down more than can be attended to.

If the grass is cut with a machine, the hands would be idle for three or four hours in the morning. Those who hire out for haying will do no other work, and if they would, there would not be much to do, as all farmers calculate to "hoe out" and do their work all up before haying. If a mower were used there would be three or four hours in the morning besides every cloudy day lost on every man. I do not think there is so much in getting down the grass as there is in taking care of it after it is down.

Farmers that depend upon their farming for a livelihood must be economical. If a mower will pay the interest upon the amount of money invested of course it is the interest of every farmer to have one. Mr. Editor I would like to see a statement of your views in the *American Agriculturist* in regard to mowing machines versus the scythe.

A YOUNG FARMER.

REMARKS.—By the use of the mower, the farmer having not more than thirty tons of hay to cut can secure his crop without employing extra hands, that is, with the help ordinarily employed on a place where that amount is gathered. The time saved in mowing can be employed in securing that previously cut. No spreading is required after the mower, which also saves time, and the hay makes more rapidly than if left part of the day in the swath after the scythe. There will always be employment enough to keep the hired man at work during the two or three hours that the farmer is taking his morning ride on the mower, with which he cuts easily what he and

his man would have otherwise bent their backs over until night. Then, the previous day's curing can be carted in, and with the horse rake, which should always follow the mower, the morning's cutting can be put in good shape before night. But who has ever seen a farm, devoted in part to hoed crops, where there was not always weeds enough to occupy all odd spells?

### On Cross Breeding.

[Not only the owners and breeders of domestic animals, but the general reader as well, will be interested in the following extracts, which we take from a lengthy prize article in the last semi-annual volume of the Journal of the Royal Agricultural Society of England. The essay, written by W. C. Spooner, M. R. C. V. S., covers a space equivalent to a dozen pages of the *Agriculturist*, and contains many valuable illustrations from English practice. We have endeavored to extract those portions embracing the pith of the whole.—Ed.]

It can not be denied that the natural laws by which the preservation of animal species is effected, are involved in considerable mystery, and though the subject is well worthy the attention and study of the practical man as well as of the physiologist, experience is yet fraught with so much contrariety that attempts to lay down any certain guide on it, have, for the most part, been received with considerable distrust. No sooner does the inquirer imagine that he has discovered some particular principle which obtains universally, than he is met by circumstances which apparently upset his previous conclusions. The maxim "*like begets like*," for example, is a rule having very extensive sway, yet, as propagation is the work of two parents, the respective influence of the one or the other is a matter involving considerable diversity of opinion, and prevents anything like a certain conclusion being arrived at. We can not do better than consider, on the very threshold of our subject, the respective influence of either parent; for on this the merits of pure or cross breeding must principally depend.

*The most probable supposition is, that propagation is done by halves, each parent giving to the offspring the shape of one half of the body.* Thus: the back, loins, hind quarters, general shape, skin, and size, follow one parent; and the fore-quarters, head, vital and nervous system, the other: and we may go so far as to add, that the former in the great majority of cases go with the male parent, and the latter with the female. A corroboration of this fact is found in the common system of putting an ordinary mare to a thorough-bred horse; not only does the head of the offspring resemble the dam, but the fore-legs likewise, and thus it is fortunately the case that the too frequently faulty and tottering legs of the sire are not reproduced in the foal, whilst the full thighs and hind quarters, which belong to the blood-horse, are generally given to the offspring. There is, however, a minority of cases in which the opposite result obtains. That *size* is governed more by the male parent, there is no great difficulty in showing;—familiar examples may be found in the offspring of the pony-mare and the full-sized horse, which considerably exceed the dam in size. Again, in the first cross between the small indigenous ewe and the large ram of another improved breed, the offspring is found to approach in size and shape very much to the ram. The mule offspring of the mare also very much resembles both in size and appearance its donkey sire.

These are familiar examples of the preponderating influence of the male parent, so far as the external form is considered. To show, however, that size and height do not invariably follow the male, we need go no further for illustration than

the human subject. How often do we find that in the by no means infrequent case of the union of a tall man with a short woman, the result in some instances is that all the children are tall, and in others all short, or sometimes that some of the family are short and others tall. Within our own knowledge, in one case, where the father was tall and the mother short, the children, six in number, are all tall. In another instance, the father being short and the mother tall, the children, seven in number, are all of lofty stature. In a third instance, the mother being tall and the father short, the greater portion of the family are short. Such facts as these are sufficient to prove that height or growth does not exclusively follow either the one parent or the other. Although this is the case, it is also a striking fact that *the union of tall and short parents rarely, if ever, produces offspring of a medium size—midway, as it were, between the two parents.* Thus, in the breeding of animals, if the object be to modify certain defects, by using a male or female in which such defects may not exist, we can not produce this desired alteration; or rather, it can not be equally produced in all the offspring, but can only be attained by weeding out those in whom the objectionable points are repeated. We are, however, of opinion that, in the majority of instances, the height in the human subject, and the size and contour in animals, is influenced much more by the male than the female parent; and, on the other hand, that the constitution, the chest, and vital organs, and the forehead generally, more frequently follow the female.

We have dwelt on this point the more, because on it hinges the difficulty of effecting certain improvements in breeding by means of crossing, and the still greater difficulty of establishing a new breed by such means. So great is this difficulty, that many breeders, finding their attempts at such improvements so frequently baffled, or observing this to be the case in the practice of others, cling with superstitious tenacity to the doctrine of *purity of blood*, believing it to be the Ark in which alone true safety is to be found.

Now, *pure breeding*, which, when carried to an excess, is called in-and-in breeding, has its advantages as well as its disadvantages. Its friends observe with great force, that when we have in breeding reached great excellence, it is folly to risk the loss of such excellence by means of crossing; and the more so, as the defects of a parent may disappear in a first or second, and reappear in the third or fourth generation; "*breeding back*," as it is commonly termed. A friend of the writer's, Mr. John Clark, of Lockerly, a strenuous advocate of pure breeding, observes that a correspondent in Suffolk informs him, that he had seen the cross tried between the old Norfolk and Down sheep, and the first cross was admirable, but they soon became disproportioned and unsightly; also the Down and Leicester in some midland counties figured for a time, and then for the same reasons were given up, and such he thinks *will be the fate of the New Ox-fords*, or the mixture of the Cotswold and the Down. He adds, that for the last four years he has used rams from the cross with Down ewes, and the offspring have answered his purpose for *fattening lambs*, but one lamb in ten presents unmistakable evidence of its mongrel origin.

Again, it is urged, that great excellences can only be perpetuated by union with similar excellences, and beyond all this that there is a certain amount of advantage from an unstained lineage—from the very possession of breed, as it is designated. The objectors to in-and-in breed-

ing urge, that by so doing we engender weakness of constitution, diminution of size, hereditary diseases, and also a tendency to barrenness; but it is argued in reply to such objections, that they occur from want of sufficient care in weeding out defective animals, whether as respects constitution or size. It is a well-established fact, that in the human subject too close affinity, such as the intermarriage of cousins, tends to mental diseases and consumption; and we can readily imagine that *when there is a tendency to such diseases in a family*, this tendency must be greatly increased by intermarrying with a member of the same family. Animals not being subject to mental diseases, the observation does not apply to them with the same force, but it is true in a lesser degree. At the same time, unless the choice is extremely confined, most of the evils of pure breeding can be avoided by careful selection and rigorous weeding. Examples of pure breeding are familiar to us in the celebrated race-horse, the first-class short-horn, and the Southdown sheep; but, so far as purity of blood alone is considered, the mountain sheep of Wales, the Highland Scotch cattle, and the Shetland or Welch, are equally pure; but whilst the latter have been propagated without care or attention, the former have, by careful selection and rigorous weeding, been considerably enhanced in value. A striking example of long continued pure breeding is afforded by the Leicester flock of Mr. Valentine Barford, of Foscoote near Towcester, who has the pedigree of his sheep from the day of Bakewell in 1783 to the present time, and since 1810 he has bred entirely from his own flock, sire and dam, without an interchange of male or female from any other flock. He observes, "that his flock being bred from the nearest affinities—commonly called in-and-in breeding—has not experienced any of the ill effects ascribed to the practice. His flock is remarkably healthy, and his rams successful, but his sheep are small."

Let us pause for a few minutes to consider what constitutes *breed*, or rather what is meant by high breeding. We shall find that it refers to very different desiderata in different breeds. In the thorough-bred horse it signifies a very high development of the muscular and nervous systems, accompanied by such mechanical structure as when united with it constitutes the highest manifestation of speed and endurance. In the ox, however, it implies very different qualities, viz., early and rapid growth—the development of flesh or muscle on the parts most prized for food—a disposition to lay on fat; these, with the possession of smallest amount of bone consistent with strength and health, are the principal characteristics of a well-bred animal. Instead of the highly nervous temperament of the race-horse, we have here a quiet, lazy disposition; in fact, a lymphatic temperament, by the influence of which the digestive organs reign supreme, and convert for the public benefit a given quantity of food into the utmost amount of flesh and fat. The same observations apply with equal force to the sheep, and in a still stronger degree to the pig. A well-bred pig is the incarnation of everything indolent and lethargic, and the very antipodes of that high organization and nervous development which belong to a high-bred horse. Examples of pure breeding are probably to be found in greater perfection in cattle, than in sheep. The *Devon* and *Hereford* cattle have descended through many generations in unbroken lines, and owe the perfection which they have attained to careful selection. The *Short-horns*, although considerably more modern in their origin, and moulded into their present form by a series of successful cross-



ses, have yet been preserved pure with even more rigorous care than the other breeds which we have mentioned. The solid frame and great feeding properties of the Herefords—the quality of beef and richness of cream, as well as the working properties of the Devons, are well known and generally appreciated; and yet these qualities are insufficient to resist successfully the encroachments of the short-horns, whose early maturity and disposition to lay on both flesh and fat, joined with fair milking properties, are such that they outnumber both the other breeds combined. As, however, the leading purpose for which a breed of cattle is kept, is generally well defined, whether for the purpose of the dairy or for that and early fattening, or simply for beef or for working as well, and, as each of these purposes can be well attained by keeping a pure breed, there is not the same temptation or inducement to cross, which is often experienced in sheep farming, in order to insure specific advantages, which can not otherwise be attained.

This being the case, we may most advantageously devote our remaining space to the practice of crossing, as illustrated in sheep breeding. We may start, then, with this principle, that to cross for crossing sake is decidedly *wrong*; that, unless some specific purpose is sought for by crossing, it is far better to cultivate a pure breed. The country is, indeed, under great obligations to those gentlemen, who carefully preserve their breed intact, and endeavor to improve it by weeding and selection. We can readily excuse their prejudices, if they have any, and have no wish to interfere with their creed. Let theirs be the office to preserve our fountains pure and undefiled, and to supply others with the best sources of improvement by crossing. And we do not confine our praise to those merely who, keeping in the high road of fashion, have succeeded in securing, both by prizes and prices, a full and sufficient reward for their labors, but would award it to those also who, keeping perhaps in the second rank, have yet supplied their neighbors and the public with valuable pure-bred sheep at moderate prices....

....It has been truly said that the public is wise, though composed of fools; and undoubtedly, when the pocket is concerned, the decision of the public is, for the most part, correct. Thus at the various autumnal fairs large lambs are in the greatest request, and command the highest prices, which in itself is a sufficient proof that with a given amount of food they make a greater quantity of mutton. It was found indeed by Mr. Lawes, in his careful and valuable experiments, that the Hampshire sheep, although they were surpassed by the Cotswold, yet exceeded the Southdown in the amount of mutton raised from a given weight of food.

The greater economy of fattening a young over an old animal may be readily explained by the fact, that whilst the latter increases in fat alone, the former does so both in flesh, fat, and bone, and thus the latter can assimilate a greater amount of the nutritious properties of the food, and is consequently a more profitable feeder....

....Some thirty years since a Hampshire farmer still living (Mr John Twynam) used the improved Cotswold ram with his Hampshire ewes, and the first cross exhibited a remarkable proof of the preponderating effect of the male. The produce, in size, general appearance, and wool, partook far more of the ram than of the ewe, and it was thought that a most valuable breed had been obtained, which, with the increased size, and weight of fleece, and disposition to fatten of the Cotswold, would combine the hardiness and folding capabilities of the Hampshire. It was found,

however, no easy task to perpetuate such a breed after the first cross—the defects of the one parent or the other would appear and reappear in the second and third generation, and it was only by careful weeding that anything like uniformity could be attained....

....To return, however, to our proper subject, we may observe that various attempts were made some years since to introduce the merino blood, with the idea that great benefit would be derived from the increased quantity and the superior fineness of the wool; and undoubtedly, if the carcass of the Southdown and the wool of the merino could be united in the same animal, the acmé of sheep breeding would be attained. It was found, however, that the quality of the wool was not a sufficient recompense for the want of early maturity and feeding properties; and at length, after many trials, the merinos disappeared by the continued use of other rams. It is very possible, however, that they may have left behind them some improvement of the fleece, for it is equally difficult in breeding to get rid of a virtue and to wash out a stain....

....We can not do better, in concluding our paper, than gather up and arrange in a collected form the various points of our subject, which appear to be of sufficient importance to be again presented to the attention of our readers. We think, therefore, we are justified in coming to the conclusions:

1st. That there is a direct pecuniary advantage in judicious cross breeding; that increased size, a disposition to fatten, and early maturity, are thereby induced.

2nd. That whilst this may be caused for the most part by the very fact of crossing, yet it is principally due to the superior influence of the male over the size and external appearance of the offspring; so that it is desirable, for the purposes of the butcher, that the male should be of a larger frame than the female, and should excel in those peculiarities we are desirous of reproducing. Let it be here, however, repeated as an exceptional truth, that though as a rule the male parent influences mostly the size and external form, and the female parent the constitution, general health, and vital powers, yet that the opposite result sometimes takes place.

3rd. Certain peculiarities may be imparted to a breed by a single cross. Thus, the ponies of the New Forest exhibit characteristics of blood, although it is many years since that a thoroughbred horse was turned into the forest for the purpose. So, likewise, we observe in the Hampshire sheep the Roman nose and large heads which formed so strong a feature in their maternal ancestors, although successive crosses of the Southdown were employed to change the character of the breed.

It has been asserted by some observers, that when a female breeds successively from several different males, the offspring often bear a strong resemblance to the first male, which is supposed to arise from certain impressions made on the imagination or nervous system of the female. Although this is sometimes or often the case, we doubt very much whether it is so frequent as to be considered as a rule.

4th. Although in the crossing of sheep for the purpose of the butcher, it is generally advisable to use males of a larger breed, provided they possess a disposition to fatten, yet, in such cases, it is of importance that the *pelvis* of the female should be wide and capacious, so that no injury should arise in lambing, in consequence of the increased size of the heads of the lambs. The shape of the ram's head should be studied for the same reason. In crossing, however, for the purpose of establishing a new breed, the size of the male must give way to other more important considerations; although it will still be desirable to use a large female of the breed which we seek to improve. Thus the Southdowns have vastly improved the larger Hampshires, and the Leicester the huge Lincolns and the Cotswolds.

5th. Although the benefits are most evident in the first cross, after which, from pairing the cross-bred animals, the defects of one breed or the other, or the incongruities of both, are perpetually breaking out, yet, unless the characteristics and conformation of the two breeds are al-

together averse to each other, nature opposes no barrier to their successful admixture; so that, in the course of time, by the aid of selection and careful weeding, it is practicable to establish a new breed altogether. This, in fact, has been the history of our principal breeds....

....We confess that we can not entirely admit either of the antagonistic doctrines held by the rival advocates of crossing and pure breeding. The public have reason to be grateful to the exertions of either party; and still more have they respectively reason to be grateful to each other....

....Let us conclude by repeating the advice that, when equal advantages can be attained by keeping a pure breed of sheep, such pure breed should unquestionably be preferred; and that, although crossing for the purposes of the butcher may be practised with impunity, and even with advantage, yet no one should do so for the purpose of establishing a new breed, unless he has clear and well defined views of the object he seeks to accomplish, and has duly studied the principles on which it can be carried out, and is determined to bestow for the space of half a lifetime his constant and unremitting attention to the discovery and removal of defects.

### Sheep Husbandry.....II.

MARKING, ETC., is more necessary in the case of sheep, than with cows and oxen, as they look more alike, and are more apt to break away from their enclosures. The system of marking dates back to the first settlement of the country, when cattle had the range of the highway and the woods, and were not seen by the owner except at long intervals. At first, each owner had his particular mark upon the ear, or elsewhere, kept upon record at the town clerk's office, and this mark was to be the evidence of ownership. Cropping, slitting, and notching the right or left ear, were the contrivances resorted to. As the country became more thickly settled, and the pastures were enclosed, owners were enabled to confine their animals to their own lands, and were less careful about marking. It is now mainly confined to sheep—the most slippery of our domestic animals—and the marking is usually made upon the wool, and, of course, has to be renewed at each shearing. The best method is to have a stamp with the initials of the owner's name, and to print the letters in large capitals upon the side of the sheep. A convenient size for the letters will be about three inches in length. The paint or ink may be made of a mixture of linseed oil, spirits of turpentine, and lamp-black. Any mixture that will leave a black mark, which the rains can not wash out, will answer.

At the time of marking, tarring should also be attended to. The tar bucket, with a swab, should stand beside the paint pot, and the nose of each sheep should be smeared with tar. This guards against the fly, which deposits her eggs in the nostrils, and produces worms or grubs in the head. The tarring may be renewed, occasionally, during the Summer. This precaution costs but a trifle, and it may save a good many sheep from disease.

PASTURE.—The flock, being marked, and tarred, are now ready for pasture. Let it not be inferred, that because the sheep is a small animal and requires less than a cow, that it can live upon air. Mutton and wool can only be made of good substantial feed, of some kind. Mullens and sweet fern, with the largest admixture of brakes, and five fingers will not answer. Experience has determined, that a wet pasture is not suitable for sheep. Some part of it, at least, must be dry, substantial upland. They thrive best upon dry gravelly loams, or in high mountainous regions, without much regard to the quality of the soil. They are usually put in the pastures most re-

mote from the farm house, as they require less care than other animals.

If the soil be poor, it should not be over stocked. Sheep should have full feed in order to thrive and pay the best profits to their owners. It is very generally observed that pastures not over fed improve every year, when stocked with sheep. All the droppings are retained upon the soil, and the grass increases from year to year. The brush should be kept down by annual cutting, especially briars, which become entangled in the wool and damage its quality.

**SALTING.**—All ruminating animals are fond of salt and this natural appetite should be gratified. There are those who claim that it is of no use, but we always suspect such farmers of loving their ease more than the thrift of their flocks. It is some trouble to visit the flock a mile or two from home weekly, especially, if it is not done on Sunday. But the salters may claim that every flock should have a weekly visit from their owner, whether they are salted or not, so that really no time is lost in the operation.

If this is not practicable, a shelter may be made of a few boards, in some convenient part of the pasture, and the salt may be left in troughs under cover, where the sheep can help themselves. This is, perhaps, the better course in any event, as they are less liable to eat to excess where they have the article constantly on hand. In Spain, which is justly celebrated for its pure flocks, the shepherds are accustomed to give the sheep all the salt they will eat, when they return from the Summer downs or pastures. They allow about two pounds and a half, on an average, to each sheep, which is consumed in about five months. It is not given in Winter, as it is thought to produce abortion in the ewes. Sheep giving milk, require the most salt—it sharpens the appetite, and leads them to eat some coarse herbage and weeds that might otherwise not be consumed.

**DESTROYING TICKS.**—Few enemies are more troublesome than wood ticks, which cling with great tenacity to the skin, and are only exterminated by violence. They are most likely to trouble sheep that have the range of a woodland, or brush pasture. Tobacco water is an effectual remedy, not only for ticks, but for any cutaneous diseases of the flock. The ticks are found in greatest numbers upon the lambs, their flesh being preferred with a nicety of taste that would do credit to dog—or man. It is generally found necessary to apply the remedy only to the lambs of the flock. Boil a sufficient quantity of refuse tobacco, or stems, to make a strong decoction. No definite rule can be given, as it must depend somewhat upon the number of animals to be dipped. Make the liquid strong enough to kill ticks. A half hogshead makes a convenient vessel for the operation, which requires two individuals. A board is laid across the top, upon which the lamb is laid after dipping, and the liquid is squeezed out by pressing the hand over the skin. The whole body should be immersed, except the head—care being taken not to get it into the mouth or eyes. If the decoction is too strong, it will sicken the lambs and make them stagger. If the old sheep are affected with the ticks, or loss of wool from any disease of the skin, they should be dipped also.

**FLESH WOUNDS** from any cause during the Summer, will need looking after. The smell of blood draws numerous flies, which lay their eggs in the flesh with as much eagerness as if life were already departed. These should have an application of tar, or of spirits of turpentine, in small quantity

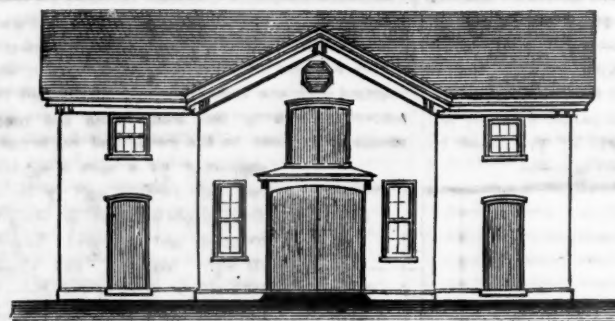


Fig. 1—South Front Elevation, on Street.

### Premium Plan of a Barn.

In our February issue, p. 60, a premium was offered for a plan of a barn adapted to a particular location—and the peculiar circumstances of a friend—with the following specifications: "The barn required, is for a small plot, say four or five acres, near a village. It is to cost about \$900 to \$1200. It will stand on a line with the north side of a street. The internal arrangement is to comprise: A carriage floor for three four-wheeled

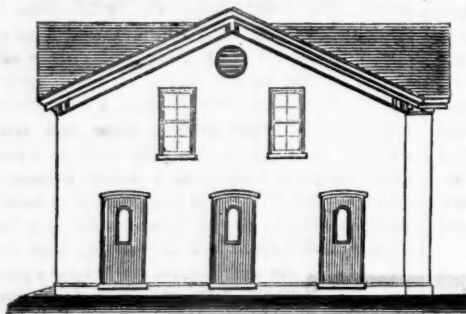


Fig. 2—West-End Elevation.

vehicles, and one sleigh—accessible both from the street and rear; stalls for four horses, and two cows; grain and feed bins; root, and manure cellars; tool-room and workshop combined, with ample space for storing farm and garden implements; one or more rooms for storing garden truck of various kinds in Autumn; ample space for hay and straw above. Any other suggestions as to outside style, or internal arrangements and conveniences, will be taken into account. The plans may be addressed to C. T., care of this office, any time prior to March 25th."

In response to the above offer, fifty-one plans were sent in—four of them after the time specified. These came from all parts of the country, there being one from nearly every State in the Union, and in but one instance we believe, was there more than one from the same town or county. Pennsylvania has long been noted for its large barns, so much so, that "A Pennsylvania Barn" has passed into a proverb. Eight of the fifty-one plans were from that State. We were much interested and amused on looking over the plans, to observe the great diversity of opinion as to what kind of a barn would meet the requirements of the proposal; for while a few of the plans agreed in some items, there were no three which did not differ very materially in form, arrangement, construction, and size. In size they ranged from 25 by 30 feet, to 46 by 95.

The variety was so great, and the accompanying suggestions so numerous, that we at first thought it would be worth while to select half or more of them, and make up a book on this special subject; but on finding that the expense for engravings, printing, etc., for an edition of 1500 copies would amount to at least \$1 a copy, we concluded it

would not pay, though such a book would doubtless be worth many dollars to every man who purposes to build a barn. We have learned by experience that it would take a long time to find the purchasers, and so we can do no more than give, from time to time, in the *Agriculturist*, a selection from the plans. We may use several of the best during a year or two—according as we have room, and as may appear desirable. In the present number we give the plans and specifications which were selected as being nearest the requirements of the original offer. (All the plans were put into the hands of a competent Committee, for the awarding of the premium.) The five engravings and the descriptions and specifications given herewith, are exact copies of those sent in for the premium. As there are some features in this plan similar to other plans contributed, it is due to Mr. Ranlett to say that every part of this plan was original with him—his plans having been completed and sent in before the other plans were examined. They were accompanied by a proposal from a responsible

Master Builder "to complete the structure in exact accordance with the plans and specifications, for \$1135, if at a conveniently accessible point within twenty miles of the City of New-York." [In our next, we will give a plan of a barn now being constructed on our own place, which we think a model one, embracing every convenience we could get into a building of this kind.]

**PLANS AND SPECIFICATIONS FOR A BARN AND CARRIAGE-HOUSE, AS CALLED FOR IN THE AMERICAN AGRICULTURIST FOR FEB., 1860.**

By WM. H. RANLETT, Architect, 52 John-st., N.Y.

Fig. 1.—South front entrance elevation.

Fig. 2.—West end elevation.

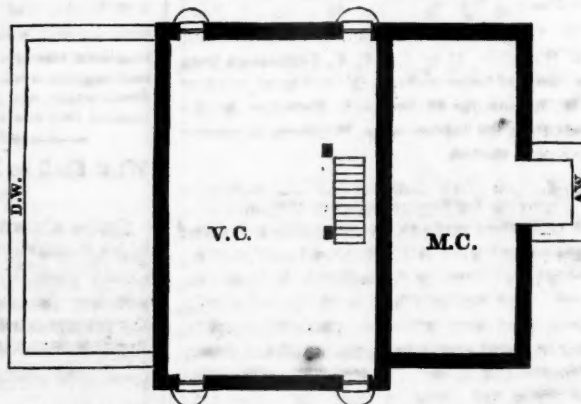


Fig. 3.—Cellars and Foundation.

Fig. 3.—Plan of Cellars and Foundation.—D. W. Dwarf walls, 2 ft. 6 in. deep, 16 in. thick—V. C., Vegetable cellar, 18½ by 30 feet, 6½ feet in the



clear—M.C., Manure cellar, 11 by 27½, 6½ feet in the clear; walls 18 in. thick—A.W., Area walls.

Fig. 4.—Ground Plan of Stalls, Carriage, Tool, and Garden Truck Rooms, Workshop, etc.—A, Carriage room, 15 by 32, less corner out 6 by 10—B, Garden truck 10½ by 12½—C, Tool room, 9

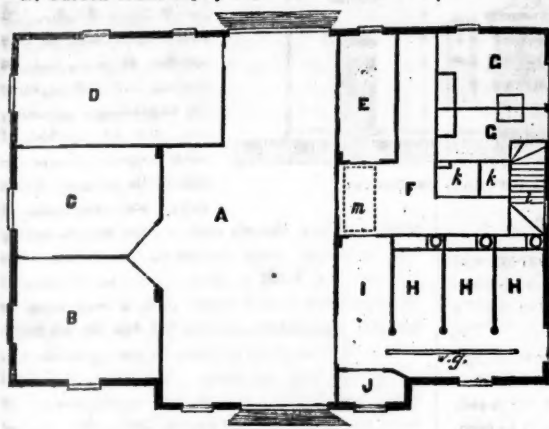


Fig. 4.—GROUND FLOOR PLAN

by 12½—D, Work shop, 10 by 18—E, Harness room, 6 by 11½—F, Feeding hall, 6 by 18, and 3 by 11½ passage—G, G, Cow stalls 9 by 11½, and 4½ by 11½—H, H, H, Horse stalls, each 4½ by 12 feet—I, Passage, which may be used for a stall—J, Lock-up for stable furniture, 3 by 5—k, k, Feed and grain bins—l, Stairway to loft—m, m, Trap doors to vegetable cellar and to hay loft—o, Ladder for fowls to enter their roosting and laying room—w, g, Urine gutter. Trap doors to manure cellar where wanted.

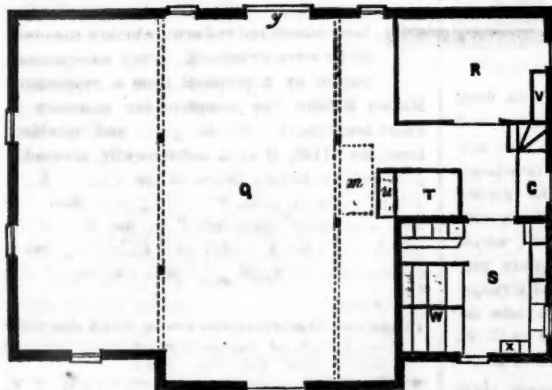


Fig. 5.—CHAMBER OR SECOND STORY PLAN.

Fig. 5.—Second Floor, containing: Q, Hay loft, 31 by 33 feet—R, Bed room, 9½ by 12—S, Fowl room, 12 by 12—T, Grain bin, 4½ by 4½ by 6 feet—U, Hay slide, 1½ by 4½—V, V, Ventilators from the cow and horse stalls to the pediment window—W, Roosts for 25 hens—X, Entrance for the fowls from the ladder—y, y, Windows to receive the hay in the loft.

Specifications of the materials and labor required to erect the building according to the plans:

Excavations made to receive main, and dwarf walls; stone work laid in lime and sand mortar; division wall between the cellars in hydraulic cement; hard brick walls around the cellar windows; fowl room lathed and plastered complete. Timber, sound spruce and pine, sawed and strongly framed and braced in every part; sills, posts, and plates, 4x9; framing beams 4x8; girts 4x6; first tier beams 3x9, 20 inches apart; second tier beams 3x8, 16 inches between centers, with one tier cross bridging over carriage room; rafters 2x8, 30 inches apart; valley rafters 2x10; stud-ding 3x4, set 2 feet between centers; water table

and corner boards 1½ in.; uprights covered with ½ planed and rebated pine boards clear of defects; rafters covered with thick hemlock boards, and overlaid with one cross charcoal tin; 3 inch tin leaders to convey the water from the roof; moulded cornices to the cover and pediments,

supported by 3 inch brackets; two pair outside and 7 single doors, made with narrow, clear 1½ tongued and grooved boards, strongly battened, and planed both sides—three of the doors to have sashes, 2 lights 9x15 glass; two pairs of loft shutters made in same manner; doors hung by welded straps and hooks, and secured with hooks, bars and locks, as required; eight windows, 8 lights each, 9x14 glass in first story, with batten shutters, hung by butts, and secured by bolts; five windows, 8 lights, and four windows, 6 lights, 9x14 glass, in second story; round and octagon blind ventilators in all the pedi-

ments; four 6-light windows, 10x12 glass to cellar, with inside shutters; door and window frames made of 1½ inch plank with heads and casing of the same; floors of milled spruce plank; stall floor overlaid with 2-inch spruce plank, with suitable manure traps and urine gutters; divisions in the horse stalls of 2-inch plank, hip posts 6 feet high 6 inches diameter; partitions and divisions in cow stalls of 1½ spruce plank 4 feet high; all feed boxes made with milled spruce plank capped with iron plate; main and room partition, of milled spruce plank planed both sides, strongly secured in the middle by a 2x4 strip; all interior doors made with ½-inch tongued and grooved boards battened, and planed both sides, hung by H L hinges, and fastened with thumb latches and bolts; stall sides lined with tongued and grooved boards 6 feet high and capped; feed bins with milled plank; hay and feed slides and stall ventilators of boards tongued and grooved, and secured by bands; suitable tight stairs to loft, and strong step ladder to cellar; a plank ladder for the fowls to enter their room in loft; fowl room fitted up with roosts and laying boxes, lattice over the

windows, etc., complete; harness room fitted up with hooks, saddle and harness pins; manure area covered with 2-inch plank battened, and a trap-door strongly hung. All the outside of the building, tin roof and leaders, and the outside doors inside, and inside of wooden shutters, to be painted two coats of linseed oil and white lead.

### What Shall be Done with the Dogs? . . . III.

#### WISCONSIN DOG LAWS.

Copies of the following have been forwarded by six or eight subscribers in Wisconsin, who will please accept our thanks. By thus "keeping the subject before the people" it is hoped sufficient attention will be awakened to secure the passage of efficient Dog laws in every State. A comparison of the different acts published, will give suggestions and data for improvement in subsequent statutes.

#### AN ACT to regulate and license the keeping of dogs.

Sec. 1. Every owner or keeper of a dog shall on or before the first Tuesday of April in each year, cause it to be registered, numbered, described and licensed for one year from that date in the clerk's office of the city, incorporated village, or town where he resides and shall pay for such license one dollar for every male dog, six months old and upwards, and three dollars for every female dog

six months and upwards. The license shall be issued and the money received by said clerk, who shall pay the same into the treasury of said city, incorporated village, or town, to be used and appropriated with the other funds therein; and the clerk shall receive for each license so issued and collar stamped the sum of ten cents, out of said funds. The treasurer shall keep an accurate and separate account of all sums received and paid out under the various provisions of this act, which account shall always be open to the inspection of any voter of the place.

Sec. 2. The owner of every dog so licensed shall keep a collar around its neck distinctly marked with the name of the owner registered, numbered, and the year for which such dog is licensed, which date shall be stamped on said collar by the officer issuing said license, and for the purpose of enabling such officer to so stamp the collar with the year for which he shall issue a license as aforesaid, it shall be the duty of the proper authorities of cities, incorporated villages, and towns to furnish such officers with a proper stamp for such purpose.

Sec. 3. Any person may, and every police officer, constable or marshal, shall kill or cause to be destroyed, all dogs going at large and not licensed and collared according to the provisions of this act; officers shall receive from the city or town treasurer, twenty-five cents for each dog so destroyed and buried by them.

Sec. 4. Whoever shall remove the collar from the neck of a dog so licensed and collared, without the knowledge and consent of the owner, or steal a dog so licensed and collared, or shall alter the stamp on such collar, shall be punished by fine not exceeding fifty dollars.

Sec. 5. The owner of any sheep or lambs suffering loss by reason of worrying, maiming or killing thereof by dogs, may present within thirty days after such loss shall come to his knowledge, to the Mayor or Alderman of the city, the President or Trustees of any incorporated village or Supervisors of the town wherein the damage is done, proof thereof, and thereupon the said officers shall draw an order in favor of the owner of said sheep or lambs upon the treasurer of said city, incorporated village or town, for the amount of such loss. The treasurer shall register all such orders in full at the time of their presentation, and shall annually on the first Tuesday in April, pay all such orders in full if the gross amount received by said city, incorporated village or town, under the provisions of this act, up to such date, after deducting all sums previously paid out under such provisions be sufficient therefor; otherwise the treasurer shall divide said amount, after deducting as aforesaid, pro rata among said orders and in full discharge thereof.

Sec. 6. Upon drawing an order as is provided in the foregoing section, the city, incorporated village, or town may recover against the keeper or owner of any dog or dogs concerned in doing the damages, the full amount of the damages done.

Sec. 7. Whoever keeps a dog not registered, numbered, described and licensed according to the provisions of this act, shall forfeit the sum of five dollars to the use of the town, city or village wherein the dog is kept.

Sec. 8. Owners of dogs may at any time have them licensed until the first Tuesday in April succeeding, upon payment to the clerk of the sums provided in the first section of this act, but such payment and license shall not exempt them from the penalties of the preceding section on any complaint already made.

Sec. 9. No new license for the then current year shall be required upon the removal of any licensed dog into any other town, or city, or incorporated village, unless the same be required by some by-law or ordinance passed under the provisions of the twelfth section of this act.

Sec. 10. The Mayor and Aldermen of any city, President and Trustees of any incorporated village, and the Supervisors of each town shall require all dogs not licensed and collared according to the provisions of this act, to be destroyed by poison or otherwise as they may ordain, and shall enforce all the penalties herein provided.

Sec. 11. Any officer of any city, town or incorporated village, who shall refuse or neglect to perform the duties imposed upon him by this act, shall be punished by fine not exceeding twenty dollars for every twenty-four hours which he shall so neglect or refuse, which shall be paid into the treasury of such town, city or incorporated village.

Sec. 12. The City Council of any city, the trustees of any incorporated village, and the supervisors of any town may make such additional by-laws and regulations concerning the licensing and restraining of dogs as they may deem expedient, and may affix any additional penalties not exceeding ten dollars for any breach thereof, said by-laws and regulations shall relate only to such dogs as are owned or kept in such city, incorporated village or town not conflicting with the provisions of this act, and the annual fee required for a license shall not exceed one dollar in addition to the sum required by the first section of this act.

Sec. 13. All fines and forfeitures imposed as a penalty for the violation of any of the provisions of this act, or neglect of any duty imposed by the same, shall be presented by complaint before a Justice of the Peace of the proper jurisdiction, and no mere technical objection to the complaint shall be alleged to defeat a prosecution so commenced, and prosecutions for fines and forfeitures under this act shall be in the name of the State of Wisconsin.

Sec. 14. In all cases under the provisions of this act, when any person or corporation shall be entitled to recover damages, the same shall be recovered in a civil action, prosecuted according to the laws of this State, and in cases where the action shall be prosecuted by a city, the action shall be prosecuted by the Mayor or chief officer of such city as plaintiff, and when the action shall be prosecuted by an incorporated village, the action shall be in the name of the principal officer of such village, as plaintiff, and when the action shall be prosecuted by a town, then the chairman of the Board of Supervisors shall be the plaintiff.

Sec. 15. All acts inconsistent with the provisions of this act are hereby repealed; *Provided*, That nothing in this act shall be construed as to repeal chapter 48 of the Revised Statutes, and said chapter 48 is hereby declared to be and to remain in full force.

Sec. 16. This act shall take effect and be in force from and after its passage and publication.

### Contraction of Horses' Feet.

This is not so great a misfortune, as some suppose. It is an unnatural condition of the hoof, but it does not necessarily produce unsoundness. If a horse has good action, and is otherwise unexceptionable, he is hardly less valuable for a slight contraction of the foot. Still, we should try to prevent it.

Bad shoeing is one cause of contraction. The blacksmith sometimes cuts away a part of the frog, which causes it to lose some of its moisture and elasticity. Then, again, he makes the shoe too much inclined inward from the outside, which prevents the natural expansion of the hoof. A pressure is thereby made upon the tender parts of the foot, and hence come fever and lameness, corns and unnatural deposits of hoof. The shoe should be made perfectly level "on the quarters," so as to allow the natural expansion of the foot. The shoes, moreover, should be forged, not twisted into shape, as is sometimes done by bungling workmen. As a general rule, shoes are worn too long without resetting. Every three or four weeks, they should be taken off, the toe shortened in, the sole thinned, and the heels lowered.

Contraction is often caused in stable-horses, by want of natural moisture. Where there is a strong tendency to contraction, the hoof should be "stopped" or plugged with a mixture of cow-dung and clay. Or, better still, a piece of thick felt, cut to the shape of the sole, and soaked in water, should be applied daily.

The broad, flat foot of the cart-horse, is seldom troubled with contraction. Blood horses are quite liable to it.

Ordinary cases of contraction will be cured by the treatment above suggested; but where it becomes excessive, and is combined with any other disease, the animal should be put under the care of a skillful veterinary surgeon. We will only add that horses of our own have been cured by turning them out to pasture for several months, wearing, meanwhile, very light shoes, and these frequently changed.

### Raising Silk Worms' Eggs—Will it Pay?

During the past year we have received repeated inquiries from abroad, as to whether eggs of the Silk Worm could be obtained in this country. The parties applying state that the worms in the silk producing regions of Europe have become diseased to an extent that threatens to seriously affect this branch of industry; perhaps to destroy it, unless supplies of eggs from healthy worms can be procured. Recently, parties in this City have renewed the inquiry, stating that after considerable search they find silk-culture in the United States almost if not quite extinct. The last census report showed that in 1844, this country produced 396,796 lbs. of cocoons, of which 176,210 were raised in Connecticut alone. Some of our readers may know by experience the cause of failure after such a start had been made. It resulted mainly from the comparatively high price of labor, preventing successful competition with European manufactures, and also from the want of practical experience in the business. Many persons expecting an immediate fortune, experimented a year or two, swelling the amount produced to a large aggregate, but abandoned it when their fever was cured by copious bleeding at the pocket.

A correspondent suggests that although it may not be practicable at present, in this country, to reduce silk profitably, yet the rearing of worms

to produce eggs for export would be remunerative. He says a hundred pounds of cocoons are worth seventy dollars for silk, but the same amount of cocoons left to produce insects, would yield six pounds of eggs worth twenty eight dollars per pound, amounting to one hundred and sixty eight dollars, which he says would pay well.

It might be profitable in some localities where mulberry trees still survive, provided one or two things are certain. First, it should be known whether worms raised from eggs produced here, would remain healthy in Europe. If the disease there exists only as a hereditary taint, eggs brought from new sources would be valuable; but if the worms contract the infection from some other cause, then the imported stock would be equally exposed to it, and would soon have no sale. Again, the disease may be only of temporary duration, and the demand would then cease when a healthy progeny could be secured at home. From these considerations we could hardly advise any extensive operations in this line, at least until some definite prices could be assured for a sufficient time to warrant necessary outlay.

### Deep Plowing—Is it Injurious?

A Texas subscriber writes to the *Agriculturist* as follows: Last Fall I plowed a field very deeply, using a team of five yoke of oxen, going down eighteen to twenty inches. It was plowed again this Spring, and wheat and corn were put in. The soil is rich, black and partly sandy clay. The wheat looks well, and shows a fine, healthy green color, but the corn is only six inches high, while corn planted at the same time on land plowed not so deep, is two or three feet high. After such experience one would think it better to adopt the Mexican method; they scratch their land open a little with an old wooden plow, and usually secure good crops of corn. What do you advise?

REMARKS.—Where too much of poor subsoil is brought at once to the surface, it will, at first, yield but poorly. In many sections substances poisonous to vegetation, chiefly salts of iron, are found at a depth of from ten to twenty inches, and these will act unfavorably, until rendered harmless by exposure to the air. It is better in such soils, to deepen gradually, say an inch or two at each plowing. Still our correspondent need not despair from the seeming ill success of this first experiment. Subsequent deep working of the land, with proper manuring, will ultimately give a seed bed that will yield sufficient to more than repay temporary loss. Even during the present season, should a period of drouth occur, he may find the deep plowing to have been profitable. The results of this year can only be told when the crop is harvested. We should be pleased to know what story the corn crib tells next Fall.

### Stirring the Soil in Drouth.

An old topic, surely, but one of the greatest practical importance. An old topic, but one about which men are not agreed in opinion. There is theory and practice on both sides. Some farmers hold that stirring the earth in dry weather, injures the roots of plants, and exposes the soil to the sun and the dry air so much, as to do more harm than good. But the other side of the question has, also, its good arguments. We will hint at one or two:

Frequent stirring of the soil in drouth renders it more porous, and so fits it to absorb moisture from the atmosphere, and to draw it up from the wet subsoil. By being frequently broken up it becomes like a sponge. Any one can easily sat-

isfy himself of this. Go into your garden and loosen up the soil over a space of a few feet square, and then see if, for several mornings after, that patch is not moist, while the surrounding surface is dry? A neighbor of ours had a potato patch last Summer, which being in a warm and sandy soil became badly parched in July. The stalks drooped, and a total loss of the crop was threatened. Here was a fair subject for a desperate experiment. Accordingly, on one of the hottest and dryest days of the month, he gave them a thorough plowing, passing the plow four times through each furrow, first plowing two furrows from the hills, and then returning the ground back by two other furrows. No rain fell for ten days after. In three days, the vines stood erect and began to take on a dark green color and to grow again. The soil was moistened by the dews of every night; the crop was saved, and it proved quite an abundant one.

Again: the stirring of the soil in drouth renders the earth a poorer conductor of heat than it would be if it remained unbroken and hard. Every one knows that a stone or any metallic substance lying in the sun, becomes hotter than a bunch of cotton, because it is a better conductor of heat. So, when the surface of the earth becomes baked and hard, it absorbs heat much more than when it is broken and pulverized. In a well-tilled garden, the ground, two or three inches below the surface, is quite cool at mid-day. It is partly on the same principle, that a few inches of mulching material will keep the ground cool and moist all Summer long. Hence, it is easy to see that stirring the soil in drouth will keep the roots of plants cool and moist, and so promote their growth.

But let the theory be as it may, the fact remains, that thorough tillage is the best possible security against drouth.

### A Word for Weeds.

Our neighbor has just made an argument for weeds, which should not go unpublished. "I let them grow in my garden," he says, "to keep off the hot sun and the bugs from my cucumbers. I would not, indeed, let enough grow to exactly smother the vines, but enough to keep off the insects, and to shade the ground and keep it cool." As he said this, the muscles of his face seemed a little disturbed, as though he half distrusted his own theory, but he kept his countenance quite well.

What a dunce! Even if the leaves shade the ground, what do the roots do meanwhile? Pump it of its moisture and send the vapor off into mid-air, rendering the soil dryer than it would have been if exposed to the full rays of the sun. Let any one try the experiment, and he will be satisfied. And then, as to protecting the vines from bugs, we very much question it. No, no. The only rational way to garden successfully, is to keep down the weeds. If the ground is suffering from drouth, run the cultivator through it, keep the hoes bright, and this will keep the soil in the best possible condition for absorbing the nightly dews. Cultivate the cucumbers well, surround them with boxes, and they will soon run away from the insects.

### QUESTIONS FOR THE N. Y. FARMERS' CLUB.

Will *soiling* improve *neat* cattle?

Which will make the best *bull-cr*, an Ayreshire cow, or a Southdown buck?

Will the introduction of *short-horns* be favorable to the temperance cause?



### A Single Ounce of Seed!

Mr. Lyman Strong, of Greene County, N. Y., writes that the ounce of improved oats received through the seed distribution of the *American Agriculturist* in the Spring of 1858, increased to seven bushels in the crop of 1859, which is at the rate of about 67 fold increase in each of the two years. Only careful sowing and culture could have produced so large a yield; but the result shows how soon a little parcel of good seed may increase to a large amount. If the same increase of 67 fold, should be obtained this year and next, the crop of 1861 would be over *thirty one thousand bushels* (31,486 bushels!) in 3½ years from the reception of the ounce parcel. This is of course a much larger increase than could be obtained in any ordinary culture; but most other seeds multiply faster than oats, and some idea can be formed of the enormous product being obtained this very year from the million or more of separate parcels of seed distributed from the *American Agriculturist* office free to subscribers, during the past four years alone.

### Timothy Bunker, Esq., at the New-York Central Park.

MR. EDITOR: I have heern tell a great deal about your Park, that Mr. Olmstead is fixing up for your city folks, on the upper end of your island. Every body that went down to the city from our place, had a good deal to say about it, and the lots of money they was laying out there in making hills higher, and hollows hollower, building bridges where there wan't any brooks, and putting pond holes where there used to be dry land, making a clearing wher there was a forest, and putting trees where there was cleared land. I expect they talked all the more about it, because Mr. Olmstead was a Connecticut man, and used to live close by us up here in Hookertown.

Mrs. Bunker was a good deal stirred up about these accounts, and thought she should like to see the thing for herself. Sally has n't said a word about visiting since she got back from down South. She thought then, she said, she should never care to get out of sight of Connecticut again as long as she lived. She has held of that mind until this Spring, and has hardly been out of Hookertown street, except to go down to Shad-town to see the baby. I have stuck pretty close to home myself, thinking that Hookertown was about as nigh the hub of the universe, as any other spot in this country. So, one day last week, Mrs. Bunker says to me, "Timothy, have you read in the papers what Fred. Olmstead is doing down there in the city?"

"Well, yes, I have read some things, and heern a good deal more."

"They say the city is fixing up a sort of country place, to walk and ride in, and Fred. is telling 'em how to spend several millions on brush pasture, and sheep walks, and tad-pole ponds!"

"Suppose you go down and see, Sally; I have a little business in the city, and shall be glad of your company."

Mrs. Bunker's trunk was packed next day, and we took the boat for the city. At first, she was inclined to think the whole story was a hoax, for she did not see, where houses were so plenty, how folks could find any room for pastures, and woodlands. But after riding up on a railroad that went by horses, six or seven miles, with houses and stores on both sides, considerable thicker than they are on Hookertown street, and we began to get sight of some vacant lots and trees, she thought there might be something in it.

The city pretty much faded out after a while, and we came to a place they told us was the Park. We found some very wide roads, they called avenues, about as smooth as a barn floor, and wide enough for six loads of hay to drive along abreast. "Now," exclaims Mrs. Bunker, "what are these people thinking of! Don't they expect to leave the road behind them when they ride out! Fred. ought to have told them better than that." I should think there were more people at work there, than we have got on all the farms in Hookertown, some drilling rocks, some carting stone, some setting out trees, and some moving dirt from one place to another, without any particular object in view. I could n't help thinking what lots of corn and potatoes, they would raise this Summer, if they were only working on farms.

They called one place a Ramble, and had guide boards put up, all round, pointing that way, as if it was something remarkable. Mrs. Bunker said it reminded her, for all the world, of Uncle Jotham Sparrowgrass's cow pasture, before he drained the musk-rat pond, and she didn't think the lay of the land was a bit handsomer."

It is curious to see how folks' minds work. Here in the country, the great object seems to be, to get rid of water, rocks, and brush. You see I spent considerable in draining the horse pond, and Uncle Jotham made dry land where the musk rats built their nests. But Fred. Olmstead has got things turned tother end foremost, and gone and filled up a valley of well nigh twenty acres with water, and made all the shores of the pond as crooked as a ram's horn. I should n't think there was a rod of it any where in a straight line. Then, in the country, we plow up huckleberry brush, sweet fern, alders, hard hack, and all such stuff, glad enough to get rid of them. But down there, we saw lots of huckleberries, blackberries, brakes, and things of that kind, put round into the shy places, as if they were something very nice.

In one spot, I remember, we came upon a slug-gish little pond hole, with rushes, lily pads, pick-erel weed, and other water plants, and on the banks a rank patch of skunk cabbage. At the sight of this last plant, Mrs. Bunker put on her spectacles to see if she wan't mistaken, and then burst into such a fit of laughter, that, one spell, I thought I should have to call a policeman to stop her. The idea of cultivating that savory article in a flower garden, seemed to upset all her notions of propriety.

Up here, in the country, we take a good deal of pains to bury the rocks, and get them out of sight. In the Park, we saw a good many places where the dirt had been removed to bring the rocks into view, and in one place they had dug a great ditch, clear from the pond away under a great boulder, as big as a small meeting-house. They were fixing it up for a grotto, I believe they called it, and they said it would cost five thousand dollars. It looked pretty much like Dick Sanders' saw-mill flume, or, Mrs. Bunker said she thought it would, when the moss got grown upon the rocks around—I thought it was a smashing price for a big rock. In another place they had tumbled a great lot of smaller rocks into a swale, and turned on a spout of Croton water to make it look like a brook. Now it run down under the stones out of sight, and again it run over one long flat rock, and fell down six or eight feet into a pool. This they called a cascade, but it looked to me just like a water-fall in a trout brook, only it wan't half so handsome. They said this concern cost over eight thousand dollars, and that is mor'n Dick Sanders' whole farm is worth,

saw mill, trout brook, and all. The little walks around the place they called the Ramble, Mrs. Bunker said, made her think, for all the world, of a huckleberry pasture full of rabbit paths, and she didn't believe but Fred. Olmstead had just made a map of some place up here on our hills, and told his hired men to mark it out accordingly. It was a pretty woodsy place, she admitted, but thought the city folks were paying pretty dear for their whistle.

That may be so, but I suppose they have earned their money, and can spend it as they please. I couldn't help thinking that it was enough sight cheaper for a man, if he has a longing for such things, to export himself into the country, than to try and import the country into the city, where, at best, he only got a small sample, and not a very perfect specimen at that. I have n't a doubt that Mr. Olmstead has done his work as well as any body could, but it seems to me that we who till the soil, get rather better looking trout brooks, water falls, and bush pastures at a more reasonable rate. We came home thinking that we were about as well off as our neighbors, content to live in a region where trout brooks run naturally, and where brakes and ferns, bull rushes and pond lilies are the portion of every man's farm. It is a great country where skunk cabbage is grown in the flower gardens.

Yours to command,

Hookertown, Ct., June, 1860.] TIMOTHY BUNKER, Esq.

[We generally let 'Squire Bunker have his say in his own words, for he utters a good many solid truths in his way. His intended criticisms upon our Central Park we think are about the best puff it has had—it looks so country like, so "woody" that it seemed just like the country to our rural visitors, and that is exactly what is aimed at.

Ed.]

### Chicory a Substitute for Coffee.

To the Editor of the *American Agriculturist*.

In the February and April Nos. of last volume, you speak of chicory as having a deleterious influence upon the human system, inducing sleep-lessness, etc., and say you should deprecate its general introduction as an article for the table to supersede coffee. Now, with all due deference, I must beg leave to speak most unqualifiedly in its praise. It was introduced to my notice some six or seven years since by a physician, and recommended, as having been analyzed and found to possess no injurious qualities; since that time I have raised it in my garden every year, and have used no other coffee, and for a good part of the time it has superseded not only coffee, but tea. I ask for no better coffee or tea, and so far as my experience goes, it is perfectly healthy. It is raised with very little trouble—a row or two by the side of a path in the garden will supply any small family for the year. Persons whose heads will not allow them to use coffee, can use chicory with impunity, and when properly prepared, a stranger, however good a judge of coffee, could not distinguish it from the best Java. This I have proved by experiment, and I hope it will be generally introduced; it would be a great saving to any family, as they can raise their own coffee, if they have even half a rod of ground.

New-London Co., Conn.

DAVID BREED.

[What is one man's meat is another's poison, and so of drinks. The testimony of medical men, and others, is too strong to allow a general recommendation of chicory as a beverage.—Ed.]

Confidence is the companion of success.

A BOOK FOR THE MILLION.—Astor's bank book



CAMELLIA DRIKELLARII.

## Beautiful Flowering Plants and Shrubs.

## CAMELLIAS.

In a stroll through the extensive glass-houses of Parsons & Co., some time since, we noticed many fine plants in bloom, which we thought most of our distant subscribers would be glad to see. But as this was not practicable, we dispatched our artist to prepare drawings of several of them, that they might be engraved and published in the *Agriculturist*, from time to time. Here we present the first specimens, with sundry useful practical suggestions upon their culture:

*Camellia Driekellarii*. This is a representative of the large and noble family of CAMELLIA. And a noble family, indeed, it is! Seldom do you see a dozen house-plants without several of these being found among them; and in a green-house they always occupy a large and important place. Their elegance of form, the deep verdure of their glossy foliage, and the pure and brilliant colors, combine to raise them to a very high rank in the floral kingdom. Of camellias proper, there are some eight distinct species, and of the varieties *C. japonica*, there are probably about one thousand.

It would be hard to find a more attractive sight than a large collection when in bloom. We have seen several hundred different varieties open at one time in extensive houses devoted to these alone. Though the general form of the flowers was quite similar, and but a few distinct colors were displayed, these were so interwoven, and passed from one tint to another by such delicate shading, one could but feel it was the work of a Master hand, bringing out the highest results of beauty with the simplest materials. Can we chide an enthusiast for his love of flowers, when their perfection has employed the mind, and exhibited the matchless skill of the Creator?

While the green-house is the proper home of the camellia, yet it may be cultivated in the parlor or living-room. The great evils which it has to contend with in ordinary dwellings are: too sudden changes from heat to cold (or vice versa,) and a dry and dusty atmosphere. The camellia will bear a good degree of cold, but a sudden change harms it. Therefore, it should be

kept where the temperature is nearly uniform. Far to the north, it is an excellent plan to have double windows before the plants, the inner sash being hung casement-like, so as to be opened by day and shut by night, or to be kept closed continually, when necessary, in very cold weather. This uniformity of temperature is specially



PRUNUS SINENSIS.

important on the approach of the blooming season. Then, the mercury should never be allowed to fall below 50° Fahrenheit. Give the plants a regular daily watering, not a deluge, nor a mere sprinkling, but just so much as the roots will

easily absorb. By a little experience, one can ascertain the condition of the soil, as to wetness, by simply rapping the pot with his knuckles. If dry, the sound will be hollow. The weight of the pot helps also to the same result. When blooming has fairly commenced, we may improve the size and richness of the flowers by giving the plants a dose of guano-water once a week,—using a pound of guano to ten gallons of water. When the flowering season is over, and the wood growth commences, guano-water should be used twice or three times a week. Does any one ask why? it is to secure a strong growth of wood and of blossom-buds for the next year. Every thing depends on the healthy growth of the plants during the present three or four weeks. Give them, therefore, an abundance of light, air, and plant-food during this important period.

Let no one forget that the Camellia lives by breathing as truly as by eating. Its breathing places are small, and are apt to get choked up by dust. The leaves, therefore, should be washed with a soft sponge, or be syringed once in ten days, the water being just blood-warm.

The best soil for this plant is a mixture of one-half turfy loam, one-third old manure, and the rest leaf mold from the woods. A little sand will serve to keep the soil free and light. These ingredients should be well incorporated together, forming a light porous mass, in every part of which the roots can easily make their way and find appropriate nourishment. It is the practice of successful florists to prepare a quantity of this soil several months before it is wanted for use, and to frequently turn and mix it, cutting the turf fine, but not sifting it.

The safest and best time to re-pot Camellias is soon after the new growth is made, when the young leaves are fully out, the end of the new wood, at the point of union with the wood of the previous year begins to turn brown, and the flower buds can just be seen. Place in the bottom of the pot an inch of broken bits of pottery or brick, and a little coarse charcoal over these, to give free drainage, and place a layer of moss above the charcoal. The ball of earth around the roots of the plant to be changed should be rather moist; and if very pot-bound, the roots having crowded to the outside of the ball, immerse it in water about an hour and let it drain a day before potting. Let the potting soil be moderately dry, and fill in around the ball with regular layers, pressing it rather firm, leaving no vacant space. After potting, the plants should be placed under cover, and protected from the sun and drying winds for a few weeks.

*Prunus Sinensis albo pleno.*

All of this Latin covers up a very pretty plant, and means simply this: A shrub from China, belonging to the Plum family, and having double and pure white flowers. It was first brought into notice, we believe, by Henderson & Co., florists in London, in 1854, and introduced here in 1857, and is rapidly becoming a favorite. All propagated up to this time by Messrs. Parsons have had a ready sale. In form and habit it resembles the well known Flowering Almond. The foliage is similar to that of the *Deutzia gracilis*. The exquisite, pure white



blossoms appear in May, opening at the same time with the leaf buds. They are formed like those of the Flowering Almond and completely load the delicate branches. The shrub is easily propagated by cuttings, layers or suckers, makes a very rapid growth and is perfectly hardy. In this it exceeds the Almond; the branches of the latter usually have several inches of the end winter-killed, and look unsightly, unless well trimmed. We saw cuttings made last year, in full flower this Spring, which shows its rapid development. It remains in bloom in the open grounds from two to three weeks, according to the weather, its snowy whiteness contrasting admirably with the grass and foliage of the lawn. When full grown it stands about three feet high, and spreads out over a space four or five feet in diameter—or if the suckers are left, it will extend over a large area. In some situations on the lawn masses of this shrub would be desirable acquisitions. It would also look well interspersed among dwarf snowballs and lilacs.

The specimen we have here illustrated was potted and removed to the green-house last Fall, and forced into flower in February. It bears this treatment well, and is thus a fine ornament for the conservatory.

In cultivating this shrub, no particular directions are needed beyond what should be observed for all plants. It will grow as easily as a currant bush, but to secure fine and abundant bloom, it needs, like most other shrubs, deep, mellow, and rich soil, kept free from weeds, with proper pruning to form a well shaped head. The plants may be layered when beginning their growth, and cuttings taken when that growth is completed.

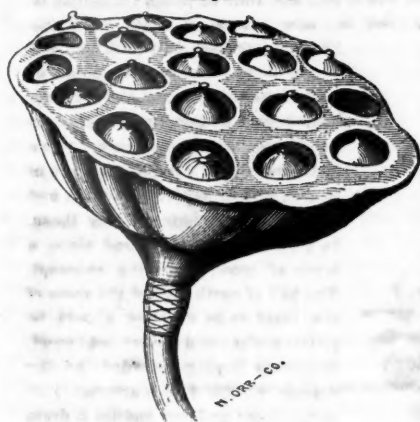


Fig. 1.

#### A Vegetable Curiosity. NELUMBium LUTEUM.

Several months since, a subscriber, Mr. Wm. Kussman, Bolivar Co., Miss., forwarded to the *Agriculturist* office, a singular looking object, which has excited no little curiosity. "What is it?" has been asked so many times by visitors, that we have thought an engraving and description would interest our readers. Mr. Kussman gave in substance, this account of it. "It is the entire seed-top of a weed which grows in one of our lakes, and is here called the 'Kenaukee nut.' It has a very large leaf. The nuts are eaten by cattle, and wild geese. Children, too, are fond of them." Fig. 1, is an accurate representation of the specimen received. At first sight it does not look like a natural product, but appears as if some one had amused himself by sticking acorns into an enormous toad-stool which had dried up and held them thus enclosed. On overhauling some of our botanical recollections we remember

to have once seen the plant in all its glory—and a fine sight it was, for there is none of our native plants that exceeds it in the size of its fo-

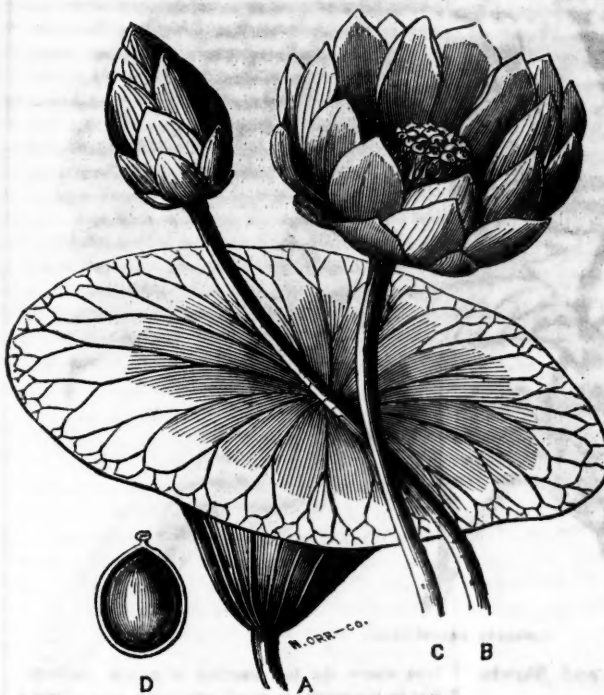


Fig. 2.

liage and flowers. The plant is known as the Water Chinquapin, or Egyptian Bean, and is the *Nelumbium luteum* of botanists. It is nearly related to the beautiful and well known water-lily, but that is small in comparison with this. The stem of the *Nelumbium* lays prostrate in the mud and throws up circular leaves of enormous size, being often two feet in diameter. These are attached to the leaf stalk at the center—from which strong ribs run, upon the under side, to the margin, like the sticks of an umbrella; the leaf is not perfectly flat, but is depressed in the center to form a cup like cavity. The stalks bearing the flowers, also arise from the prostrate stem, and bear a single flower of a delicate yellow color. The second engraving (fig. 2) gives a good idea of the general appearance of the flower, which is 6 inches or more in diameter; before it is fully expanded it resembles a small summer-cabbage. After the flower falls away, the pistil (in the center of the flower) enlarges very much, and ultimately becomes the curious fruit. The specimen from which our engraving is taken, is four inches across. We can get an idea of the structure of this fruit, which is so different from any other, by looking at that of the common Buttercup, after the flower has fallen off; we find here a little rounded head of distinct fruits (commonly mistaken for seeds,) all collected at the end of the flower-stalk; if we now imagine the end of the stalk on which they are situated to be very much expanded, so as to bring these fruits all on a level, and to enlarge in such a way as to include them in its substance, we shall have the botanist's view of the nature of the fruit of the *Nelumbium*. The acorn-like bodies are separate fruits, imbedded in the swollen end of the flower-stalk. These separate fruits contain but one seed each, which is pleasant and eatable. The root bears tubers something like Sweet Potatoes in shape, and they are said to be, when well cooked, as palatable and nutritious as the potato; both these and the seeds are favorite articles of food with the Western Indians.

The plant is found in the rivers and lakes of the

West and South; at the East it is found only in the Connecticut river at Lyme, and near the Delaware river in a creek in the suburbs of Philadelphia. The latter locality has long been celebrated among the cultivators of botany; it is readily accessible from Philadelphia, being but a short distance below the Navy Yard. Other species of *Nelumbium* are found in other countries; one, the *Nelumbium speciosum*, is often found figured upon the ancient tombs and monuments of Egypt. Our readers may remember the allusion made to it in the article "A visit to Kew Gardens" published in the April *Agriculturist*, page 113. It was likened to a piece of plum pudding, stuck full of hazel nuts, which very well describes the appearance of the species here illustrated. The fiber from its leaf-stalks is used for wicks to the lamps burned in the Hindoo religious services. In China and Japan, it is regarded as a sacred plant: in these countries it is largely cultivated, for food and as an offering to their idols.

We are always pleased to receive interesting specimens of this kind, and illustrate them when they are of sufficient novelty or interest. Many articles sent, are rare only in the immediate neighborhood of the person forwarding them, so that all can not be thus noticed, which will explain why some favors have been apparently overlooked.

#### Troublesome Flowers—Look Out!

It sometimes happens that young cultivators, on reading of a certain flower, or seeing it in a bouquet, forthwith order it from the florist, and set it out in their garden, knowing nothing of its size and general habits. Sometimes, too, it happens that plants with pretty flowers, are so very rampant in growth, that they spread over our beds rapidly, and thus become a nuisance. A friend of ours relates, in illustration, a story of a neighbor who was much pleased with the flower of the St. Johnswort, (*Hypericum perforatum*) which he saw for the first time in the garden of a citizen. Having procured seed and grown the flower, he exhibited it with much satisfaction to his visitors, and when naming it, he was particular to emphasize the prefix thus, *Saint* Johnswort. The next year it had made its way out of the garden, and showed its yellow face here and there in the adjoining pasture. He began to doubt the saintly qualities of the plant, and in reply to one asking its name he replied, simply, "Johnswort." The following year it had overrun a large area and established itself as a complete nuisance, and when the now vexed cultivator was asked "What is it?" "That *infernal* Johnswort" was the answer.

It would be well for young gardeners to inquire fully about the habits of new plants, before introducing them to their grounds. A few that we now recall as having been troublesome to us, are these:

*Antirrhinum linaria*, commonly called "Butter

and Eggs." It is intrinsically a pretty flower, but if once spread over a garden it becomes as troublesome as quack grass.

*Coronilla varia* has quite handsome flowers, in heads like clover, but the roots—oh! how they run.

*Calystegia pubescens*, introduced only a few years ago, we think from Japan, and highly lauded by Mr. Downing and others, but is now little better than a garden pest. Its fine, double rose-colored flowers are indeed as beautiful as its early admirers declared, but the roots spread everywhere. For this plant, we have tried setting the roots in a tight box or pot and then plunging it in the garden border, keeping watch lest the roots creep over the rim. So managed, it makes a very desirable plant.

### Naming Flowers.

At this season of the year we are in almost daily receipt of flowers for which a name is wanted. With many of them a glance is sufficient, while others are not so easily determined. It always affords us pleasure to reply to those sending them, and we should do so more frequently were the descriptions accompanying the flowers more complete, or the specimens themselves more perfect. Will those sending such flowers or plants observe these few directions.

1. Let the specimens be as complete as may be—the entire flower if single, with as much of the flower-stalk as possible, and the whole spike, if growing in that form. The flower should be spread out as carefully as may be, and pressed between the leaves of unsized paper before sending.

Enclose also, a few of the leaves, with leaf stalk attached, taken from both the lower and upper part of the plant, and mention any peculiarity of the remaining foliage.

3. Give the height of the plant, time of flowering, general habit—that is, whether the flowers are single or in clusters, upon the extremity of a single stalk, or upon the branches of a bush-like growth.

4. State in addition, whether the plant grows wild, or is cultivated, and the probabilities of its being a native of this country. Is it annual or perennial, succulent, (soft or juicy stemmed) herbaceous, (hard stemmed, but not woody,) or woody, and is it found growing upon dry or wet land, in the open fields or woods.

Descriptions like these will usually help to classify a new plant at once, and we can readily turn to a botanical description of it. These remarks are suggested, in part, by a specimen of a purple flower received from H. La Feta, Clinton Co., O. From the imperfect specimen, we judge it belongs to the Orchid family. It could be more easily determined, if the particulars noted above were furnished.

BEAUTIFUL AND TRUE.—Well has a forcible writer said: "Flowers are not trifles, as one might know from the pains God has taken with them everywhere; not one unfinished, not one bearing the marks of brush or pencil. Fringing the eternal borders of mountain-winters, gracing the pulseless breast of the old grey granite, everywhere they are harmonizing. Murderers do not ordinarily wear roses in their button-holes. Villians seldom train vines over cottage-doors." And another adds: "Flowers are for the young and for the old, for the grave and the gay, for the living and the dead, for all but the guilty, and for them when they are penitent."

### A Flower-Beggar.

MR. EDITOR:—I'm in distress. For several years, I have been annoyed with flower-beggars. If these people were very poor, and could not have gardens of their own, the case would be altered; but generally, they have land enough, and health enough, and time enough, but they are too abominably lazy to work. During the great rose-period, June and July, they beset me in droves, day after day. They wander through my garden, exclaiming, Oh! what a fine rose, that white one. See that pink, that crimson, that yellow, and those other roses; please Sir, give me a bouquet of them, you have so many. If I fill their hands with flowers, and then ask them why they don't have gardens of their own, they blunder out something like this: "Oh, I haven't the time, or don't know how;—what lots of fine things you have got!"

Now, Sir, can't you help me to rid my garden of these pests? In Spring and Fall, I often give them roots and seeds to help them along, but they hardly thank me: they plainly hint that they would like to have me go and set them out and take care of them also! Lately, I lectured a young man about this thing—adding some choice plants to enforce it—and he promised, quite languidly, to try and do better. As he turned to go away, I said: "Friend, do you take the *American Agriculturist*, or any other good horticultural paper?" "No." Then I replied: "Hum, I thought so." Yours in disgust, HORTICOLA.

[Have patience Horticola. Though it is annoying in the extreme to be so pestered, there is yet the comfort of the compliment thus paid to your taste and skill. Moreover, this admiration of flowers is the first symptom of the contagion of improvement, communicated by your example. If you continue to inoculate your neighbors with occasional presents of bouquets, depend on it, some day you'll see the infection—no, the affection—breaking out all over their gardens and door yards; first, perhaps, in a few tuberculous crocuses, or lilies, etc., but finally coming to full development in profuse efflorescence of annuals, perennials, and it may even take the aggravated form of shrubs, trees, and landscape gardening. We have known such cases. Meantime, continue to apply the "*Agriculturist*" as a stimulant to them and an emollient in your own case, and report progress next season, or sooner if you find any change.—Ed.]

### A Bed of Ivy.

In climates where the evergreen Ivy will flourish out of doors, its appropriate place is on walls, or clambering up the trunks of old trees, etc. But must we give it up in colder climates? Not altogether. Train it on the ground, if not up in the air. Choose any suitable portion of the pleasure grounds—if in the shade, it will be all the better, as the leaves are apt to be scorched in the sun—cut out circular or other fancy shaped beds, and plant them with roots of Ivy. The gold-striped, silver-striped, and the common English, and the Irish Giant varieties may be planted together or in strips, and so trained as soon to cover the beds completely. The branches should be kept within the boundaries of the beds by pegging down, and by clipping. At the North, such beds will need protecting in Winter by six inches or more of straw, or by evergreen boughs laid over them.

We have known persons at the far North complain of poor success with rhododendrons, hollies, laurels, etc.; let us propose to them to fill

their failing beds with plants of Ivy, covering them in Winter with several inches of forest leaves. Lay a few stakes or a little brush over them, to keep them from blowing away. We will warrant such a bed to give as much satisfaction as the finest collection of flowers.

### Native versus Foreign Grapes.

The question is frequently asked us: "Why all this ado about raising native grapes, when there are foreign varieties already tested, and proved to be of the very finest quality! The native grapes, with hardly an exception, are poor things, fit only for slovens and coarse grained people. Why not take the delicate and refined grapes which Europe offers us?"

And then, to enforce this appeal, we are occasionally shown a bunch of Black Hamburg, or Sweet Water, or Royal Muscadine, which has been grown in the open air, and the question is put again in a sort of imperious tone, Why not plant these in preference to your coarse, foxy natives?

To all of which we humbly reply, that the facts are not as our questioner assumes. Under favorable circumstances, a foreign grape may succeed in our climate for a few years—say two, three, or five—but after that, and even before, it is liable to be destroyed by mildew or other diseases. But a native grape will, with fair treatment, flourish fifty or a hundred years in full health. Most foreign grapes, too, are tender, and need protection from the frosts of Winter. A good way to convince any one about this matter, is to show him two lots of vines, standing side by side, the one native the other foreign, and he will generally find the foliage of the first bright and healthy, while that of the latter is yellow, crumpled and falling off, and the fruit cracked or covered with mold.

And here, we are reminded of the inquiry of another correspondent, viz.: whether, if cuttings were taken from foreign vines which have been long growing in this country, and so become acclimated, they would not be as hardy and healthy as natives?

Our friend must be referred to the simple fact that, as a general rule, all vines of foreign extraction, if grown in the open air of this country soon become the prey of mildew. They may hold out a while, but soon succumb: they can not be relied on. So that you can not get healthy vines to start with, and if you did, you can not change their constitution.

It is the opinion of some, that mildew is itself a plant, growing upon the vine, the roots penetrating the canes, absorbing their vitality, and preventing their healthy action. So long as this parasite can be kept off, the foreign kinds will do tolerably well. Native Americans have so firm bark and wood that the mildew can not grow as well upon them.

But one word more with our first inquirer: You misstate the case, when you say that our native grapes are coarse and unfit for refined mouths to eat. This may have been partly true many years ago, but it is not now. The Diana, Delaware, Rebecca, Isabella, Catawba, etc., when well grown and fully ripened, suffer nothing in comparison with an equal number of European grapes. And we are likely to improve even upon these. So that now there is no need of trying to grow the uncertain and sickly foreign kinds.

We could wish that every gardener would plant a few seeds annually, of his best grapes, and so have a race of new sorts continually coming forward. Out of them all, we should get



some important additions to our stock of superior grapes. One good native, like the Delaware, would be worth fifty of the green, milky, and delicate exotics. The time is not far distant, we confidently believe, when it may be said of our northern hill-sides:

"The vine, too, here her curling tendrils shoots,  
Hangs out her clusters glowing to the South,  
And scarcely wishes for a warmer sky."

### Summer Pruning the Grape.

The question is sometimes asked: Why prune vines at all? Why not let them ramble over fences and trees like wild vines? Well, you may do so, if you want wild grapes, and if you like to climb into trees to get them. But if you wish to keep your vines within reach, and if you wish them to bear fruit on their lower branches, you must prune them.

As to summer-pruning a word or two: Fall or Winter pruning tends to excite vigorous and rampant growth in the canes which are left. The trellis soon becomes covered with lusty young canes and a thick mass of leaves; the foliage is excessive. Every vine grower must have felt the absurdity of producing such an over-growth of wood in Summer, just for the fun of cutting it off in the Fall. Can't we avoid this waste of wood, and this rude hacking of the vine? Summer pruning, judiciously applied, will contribute to this result.

The tendency of the vine, as with all fruit-bearing trees, is to send the sap with greatest force to the topmost buds, leaving the lower buds to become weaker, year after year. If we pinch off these upper shoots in early Summer—say when they have made two or three feet of growth—leaving only four buds, it will check this excessive growth at the extremities, and throw more vigor into the lower branches. These top shoots will push again, and will need a second and perhaps a third pinching. They must, however, be allowed to gain a leaf or two between each pinching; otherwise the check will be too severe. If the lower shoots are not pinched in at all, or but slightly, they will gain strength, and thus the force and fruit of the vine will become quite equally distributed. There will also be less rampant wood to be cut off in the winter pruning.

Moreover, as every one knows, the ripening of the fruit and the healthy growth of the lower branches depend on the proper return-flow of elaborated sap from the extremities. If, by reason of undue moisture in the soil, or of untimely rains and long continued damp and cloudy weather, the production of wood is unduly prolonged, the fruit clusters will be robbed of their necessary food; the berries will not mature and ripen well. Here, let the hand of art see what it can do. Let it check that excessive wood growth, by nipping off the ends of the watery branches. This will send back the sap to the clusters and to the fruit-buds for next year. It will cause the berries to mature earlier, and uniformly in all parts of the vine.

Of course, all suckers springing up around the trunk of the vine should be pulled off as they appear. All superfluous shoots pushing out between the fruit bearing canes, or among the canes designed for next year's fruit bearers, should be resolutely pulled off. Only one fruit bearing shoot should be allowed to grow from a single joint. No fruit spur should be suffered to bear more than two clusters—some say not more than one. The fruit should be picked off just in proportion to the thinning out of the branches.

Yet, we must say, in conclusion, that summer-

pruning is often done with too severe a hand. "What is worth doing at all," say some beginners, "is worth doing well;" and so they cut and slash away without mercy. Off go long shoots, hacked within a few inches of the clusters, and down fall the leaves in showers.—"So as to let the light and air in," say the zealous vine dressers. Rather than this rude treatment, we would say, let the vines alone. No one can have watched his vines for many years, without seeing that his largest clusters grow on his most vigorous canes. The practice of stumping off the fruit branches within a few inches of the clusters may answer on foreign vines in graperies, but not on the robust natives. Three leaves, at least, should be retained beyond the clusters. Nip off the ends of rampant canes, but do not chop them near their base. Prune in Summer, but do it with moderation and discretion.

For the American Agriculturist.

### Colloquy about Fruit Stealing.

*Father.*—So, you say my oldest son, John, is a promising candidate for the State Prison? and that, simply because he took a few pears and grapes from your garden.

*Gardener.*—Yes, I said so, and I'll stand by it. In stealing, he showed that he had no true moral principle, and little regard for my rights and feelings as a neighbor. Such a boy isn't safe if running at large, and ought to be locked up. If occasion offered, why wouldn't he slip his hand into a merchant's money-drawer, and plunder its contents?

*Father.*—Be careful, Sir, what you insinuate! John is as smart and as respectable as any of my neighbors' sons. I don't believe that taking a basket of fruit will destroy his standing in society. You're rather puritanical in your notions.

*Gardener.*—I wish Sir, that he might be respectable, but his conduct of late has injured him. His education must have been neglected. I'm afraid his father seldom taught him the Savior's rule, "Whatsoever ye would that men should do unto you, do ye even so to them."

*Father.*—Look here, Sir, don't be so wonderfully precise. You bear down too hard on me and John. He was only coming cross-lots, one day, and happening to see your grapes were ripe, he thought he might as well fill his pockets, seeing there were so many. I believe, too, he went over by night with some other boys, just for the fun of it, and got a hat full of Seckel pears: you had enough more, didn't you?

*Gardener.*—Such cases happen too often. Suppose your son just happened to see the merchant's till open, and thought he might take a handful, as there was a plenty, what would the merchant happen to do with John?

*Father.*—But hooking fruit isn't as bad as stealing money.

*Gardener.*—"Yes Sir, the law may not punish it as severely, yet it is as wicked and as base. Nowadays, the products of a garden and orchard are more valuable than they were formerly. They are more various, rare and costly. Now, if I lay out from fifty to a hundred dollars to stock my grounds with fine fruit for my family and friends, have I not as much right to that property as to any other, and ought not my rights to be respected and guarded? And more than this, the loss of money, vexatious as it may be, is less difficult to bear, than to have fruits stolen, upon which one's care has been bestowed perhaps for years. The disappointment is not measured by the mere market value of such articles.

Parents are much to blame for the loose morality which they teach their children on this subject. And our legislators are to blame for not passing more stringent laws against fruit stealing. Many years ago, an association was formed in Salem, Mass., "for the detection and punishment of trespassers on gardens, fields and orchards."

The members pledged to each other their aid in ferreting out and prosecuting offenders, and they offered rewards for all information concerning thieves. They published, at their discretion, the names of convicted offenders. And what, think you, was the result? For the first year, only one garden belonging to the members of the association was molested. Next year, it was reported that "the evil had almost entirely ceased" in that vicinity. Soon, the towns of Dorchester, Roxbury and Quincy, followed the example, and with like good effects.

I wish that every town in every State had such associations. The "smart and respectable" son John would soon be trapped, or he and his father would have to leave for parts unknown. The public morals would improve, and horticulture would receive a new impulse. HONESTUS.

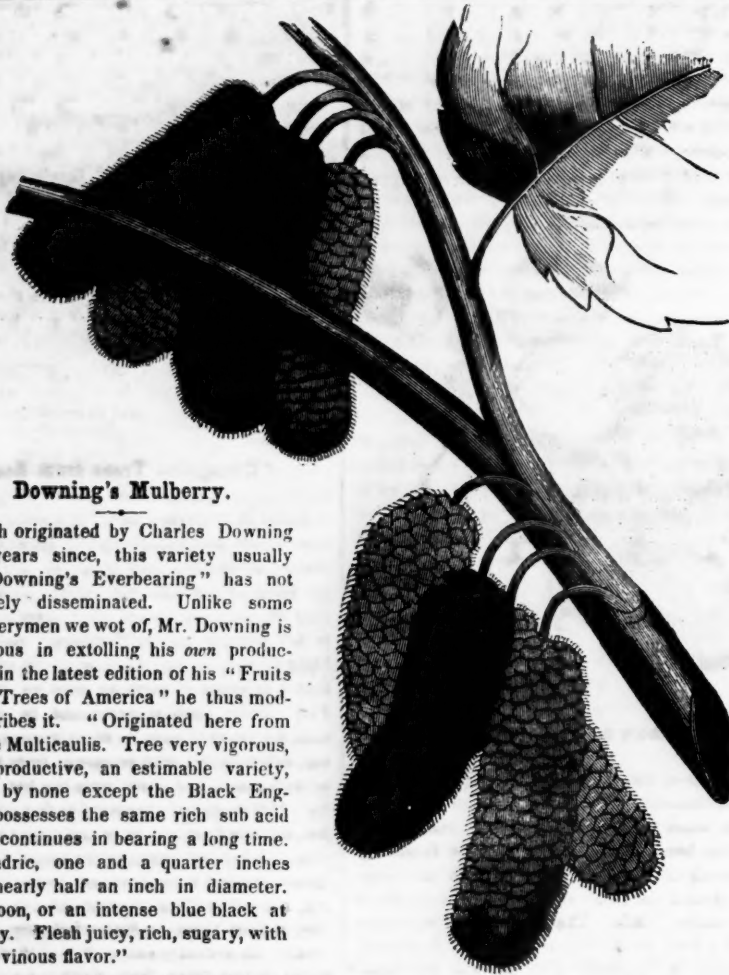
### A Law to protect Fruit, etc.

The following act was passed by the Pennsylvania Legislature, at their late session, and has been approved by the Governor. It is of importance to farmers and gardeners:

SEC. 1. That the willful taking and carrying away of fruit, vegetables, plants, fruit or ornamental trees, vines or shrubs, in the counties of Huntingdon, Washington, Allegheny, Berks, Lancaster, Lycoming and Delaware, whether attached to the soil or not, shall be deemed, and the same is hereby declared a misdemeanor, and the offender may be prosecuted and punished as such under the laws of this Commonwealth, and on conviction thereof in the Courts of Quarter Sessions of said counties, shall be fined, not exceeding fifty dollars, and imprisoned not exceeding sixty days; such fine or penalty to be appropriated as provided in the second section of this act.

SEC. 2. That any person or persons who shall willfully enter, or break down, through, or over any orchard, garden or yard-fence, hot-bed, or green-house, or who shall wrongfully club, stone, cut, break, bark, or otherwise mutilate or damage any nut, fruit or ornamental tree, shrub, bush, plant or vine, trellis, arbor, hot-bed, hot or green-house, or who shall willfully trespass upon, walk over, beat down, trample or in anywise injure any grain, grass, rye, vegetables, or other growing crop, shall, and may, on conviction thereof, before any Alderman or Justice of the Peace, or in any Court of law in said county, have judgment against him, her, or them, in a sum not less than five, nor more than one hundred dollars, with costs of suit, one-half the damage or penalty to go to the use of the informer, the other half of the damage or penalty to the occupant or owner of the premises on which the said trespass shall, or may be committed; and, in default of payment of said fine or judgment with costs of suit, the party convicted may, and shall be committed to the jail of said county, for not less than twenty, nor more than sixty days; said complaint or action to be in the name of the Commonwealth, and the testimony of the owner or occupant of the premises shall be admitted as evidence to prove the trespass and damage sustained: *Provided*, That when the owner of the premises shall become the informant, then one-half of the penalty shall be appropriated to the school fund of the district in which the trespass was committed.

REMARKS.—This is a partial step in the right direction. We do not understand why the law is confined to a few counties. Do these alone raise fruit? or is no other section infested with fruit stealers? We cannot think either supposition correct. Neither can such felony be more criminal in that than in any other portion of the State. Again, it seems hardly equitable to limit the amount to be paid to the injured party to half the fine imposed, unless the infliction of at least double damages be certain. The man who is at the pains and expense of introducing and maintaining such desirable improvements as are named in Sec. 2, should receive the most ample protection. While the sheep-killing dogs are being looked after, will our legislators please attend properly to fruit-thieving boys—full grown or otherwise—let them also be duly "collared" and registered in some appropriate "public institution," to gather the fruit they richly deserve.



**Downing's Mulberry.**

Although originated by Charles Downing some 15 years since, this variety usually called "Downing's Everbearing" has not been widely disseminated. Unlike some other nurserymen we wot of, Mr. Downing is very cautious in extolling his *own* productions, and in the latest edition of his "Fruits and Fruit Trees of America" he thus modestly describes it. "Originated here from seed of the Multicaulis. Tree very vigorous, and very productive, an estimable variety, surpassed by none except the Black English, and possesses the same rich sub acid flavor. It continues in bearing a long time. Fruit cylindric, one and a quarter inches long, and nearly half an inch in diameter. Color, maroon, or an intense blue black at full maturity. Flesh juicy, rich, sugary, with a sprightly vinous flavor."

A lady who has cultivated this fruit for several years writes to the "Rural New-Yorker," from which we borrow the above cut. . . . "I have never before known a fruit that gave such universal delight, suiting all palates, and equally excellent with cream and sugar for the table, or freshly gathered from the tree to eat from the hand. In puddings they are very good, in pies unsurpassable. . . . The trees are picturesque, hardy and rapid growers. They give fruit early, which improves in quality and size as the trees advance in age, and never fail of yielding a profuse crop for more than two months of the season when such fruit is most wanted."

The cut shows the fruit near two inches in length, or much longer than Downing describes it, but we are assured that in favorable situations—a rich, deep and rather sandy soil—and under good culture, the fruit reaches the size here represented. It begins to ripen at the close of the strawberry season, and shows fruit in all stages of growth. Besides making a palatable dish of sauce, or a fine pie in its ripening season, the berries can be put in cans, or bottled and kept as other fruit.

The trees are quite ornamental, with their dark green and very large leaves, forming handsome objects upon the lawn. Unfortunately they have not been cultivated to much extent except by a few nurserymen, foremost among whom is Dr. Grant, and are still held at a high price—\$1.50 to \$3.00 each, we believe. Perhaps unpleasant recollections of the "multicaulis fever" have created an unjust prejudice against the mulberry. So palatable and wholesome a fruit should be more generally cultivated, particularly when borne on a tree of desirable shading qualities. Were the excellence of the berries generally

known, they would be in demand for marketing—as it is, we have not seen them offered for sale. The trees can be multiplied by grafting, or budding them upon the common white mulberry, but can not be produced true to kind from seed, although new seedlings of value may be obtained.

#### Kansas Correspondence.

COMPLAINTS AGAINST EASTERN NURSERYMEN.

To the Editor of the American Agriculturist:

I have just received a lot of trees from an Eastern nursery. Many of the apple trees have bunches or wart-like substances on the roots, varying in size from a walnut upwards. These are the first I have ever seen, and I wish to know the cause, the future effect upon the trees, and what will cure them. And further, can you tell us of a nursery from which we can get such things as are asked for. The orders sent from this place to ———, amounted to \$1,500, and the returns were anything but satisfactory. For Apples, instead of Winesap, Limber Twig, Yellow Bellefleur, etc., we got R. I. Greening, Baldwin, Northern Spy, Rambo, etc., condemned by Western pomologists. For Catawissa and Allen's Raspberry, the Red Antwerp was sent us. We sent for the Duke Cherries, and got Bigarreaus, not but that the latter are better, for many purposes, but when one orders a specific variety, he wishes to obtain it. For Wilson's Albany, Hovey's, Longworth's and other Strawberries, varieties were sent us which were almost unknown, and wholly unfit for garden or field culture. The same may be said of Peaches, Pears and Plums, a Peach Plum being sent out instead of a Green Gage which had been ordered.

Now, Mr. Editor, if I order a thing and pay for it I want that thing notwithstanding something else may be equally as good. If I send for a particular fruit tree it is because I wish for that variety, and think I can tell what will suit my palate and our climate, better than the seaboard, or even Lake-girt nurserymen.

Nemaha Co., Kansas.

KANSAS COMPLAINER.

REMARKS.—1. The warty excrescences may or may not do serious injury, but we should be afraid of them, and unhesitatingly condemn any nurseryman sending them out. They are seldom found in a well regulated, well cared for nursery, and an honest dealer or one who regarded his reputation would not let them be seen. We know of no remedy. If such trees must be used, it is better to cut off the roots so affected, or at least pare off all the warts, if it can be done without entirely spoiling the trees. At a distant point, where it is difficult to get other trees at once, it may not be expedient to throw them away, but give them a trial. With a paring off of the warts, and a change of soil, the defect may not be a fatal one. You should write to the nurseryman who sent them, and his answer, if not satisfactory, should be published.

2. The large changes made in your order were an imposition, if you ordered specifically, and left no discretion with the dealer. A single substitution may sometimes be made by a nurseryman, with the best of motives and for specific good reasons; but a wholesale one, as in your case, can not be excused. No honest dealer would do it. He would fill the order as made out, getting the desired varieties of others if he did not have them, or he would hand the order over to a reliable man, or frankly return the remittance. There can be no dispute on this point. In buying trees and plants, it is always best to send only to parties you can depend upon; and also to be explicit, naming exactly what you want, or giving just so much discretion to the dealers as you are willing to allow them. We can not undertake a commission business, but in special cases, where subscribers live at remote points, and have no means of forming an opinion of the character of a dealer, we shall not object when it is especially desired, if a subscriber sends his order to our care, to be forwarded to the party named, or to some other party, in case we deem it better for the purchaser. In any such case, let the order be full and explicit; and let the authority for us to change its direction be clearly and briefly stated, so that it may involve as little care and labor on our part as possible.

3. We could name a dozen nurserymen whom we know to be reliable, but this would be unjust to many others equally reliable and every way worthy. We hope no complaints can be made against any of those who have lately advertised in the *Agriculturist*—for, some time since, we commenced rejecting advertisements from parties whom we had reason to suspect of want of integrity or want of care. Our business columns are open to the public, however, and we can not always discriminate between the good and bad. A few well authenticated cases of fraud, or unfair dealing, on the part of nurserymen or others, will always be sufficient ground for declining their advertisements, no matter what price they may offer, or what may be the pecuniary loss to ourselves. We have only space for good advertisements, and we mean to charge such a price as only those who have a permanent business and character to maintain, can afford to pay.

He that never changes any of his opinions, never corrects any of his mistakes.



### Pavements under Plum Trees.

To the Editor of the American Agriculturist.

I have in my garden a very handsome plum tree, about 12 years old, which blossoms freely every year, and sets abundance of plums, but they uniformly fell off before arriving at maturity, until last season. One year ago last Spring I was advised to pave the ground under it with bricks. I did so, and the result was a full crop of fruit. Can you tell me what particular virtue there was in the bricks? JERSEYMAN.

Morris Co., N. J.

REMARKS.—The plums dropped off probably in consequence of injury by the curculio. A careful examination might have shown their crescent shaped mark, illustrated upon page 165 of the *June Agriculturist*. When the pavement was laid, the insects were in the soil, in their larvæ or worm like state, and the bricks prevented them from coming to the surface and changing into beetles. We have known a stone pavement, or a board flooring to have the same effect. There should be no cracks large enough to permit the small insects to escape. Where boards are used, it is well to cement between the cracks. A coat of cement (water-lime) is sometimes laid under the trees, as far as the branches extend, for the same purpose, and is quite as efficacious. The objection to this method is the partial exclusion of air and moisture from the roots, without which the tree can not long remain healthy.

### A Cheap Tree Protector.

Several species of insects undergo their last change in the ground, and then make their way upward to deposit their eggs upon the branches of trees. The well known canker worm, whose nests so often disfigure the apple, cherry and elm trees, is of this description. The worms (larvæ) hatch in the Spring from eggs deposited the previous season, feed upon the leaves, making the tree look as if singed with fire, and when full grown descend to form their cocoons, and complete their transformations. In the Fall they commence emerging from the ground, and, according to Harris, continue to come out at intervals in mild weather until April, mostly, however, in the months of October and March. The females are wingless grubs, and make their way



by crawling up the trunks of trees, while the winged males flutter about, and pair with them on their journey. Various means have been devised to trap them while in this stage. The accompanying illustration shows a simple arrangement used by Raymond Irish, Bristol Co., Mass. A strip of sole leather about two inches wide is wound around the trunk of the tree twice, making a collar of double the thickness of the leather, and is fastened to its place by a single nail driven through the end. A piece of thick paper—tared sheathing paper is preferred—about six inches wide is cut to the form shown in the figure, and the hollowed edge tied around the leather on the trunk. The end of the paper overlaps two or three inches. This forms a kind of cap of conical shape, the lower edge standing out an inch or two from the tree. This cap is then covered with a mixture of tar and oil, used in

such proportions as not to run, and yet remain sufficiently soft to arrest the progress of the insects. The paper will need coating several times during Fall and Spring, and they should be examined occasionally to see that the insects do not make a bridge of the bodies of their dead companions. Where no better protection can be obtained, this plan may answer a very good purpose.



Houghton's Seedling Gooseberry.

While great attention has been given to the introduction of new and improved varieties of grapes, blackberries, currants, etc., the gooseberry has been much neglected. This is owing very much to the lack of success with the English sorts and the small size and indifferent flavor of the native kinds. The gooseberry succeeds best in a cool, moist climate, hence it flourishes admirably in England. Our hot and dry Summers are unfavorable to its healthy growth; a mildew usually attacks the foreign varieties when the fruit is about half grown. In the vicinity of Paterson, N. J., some of the gardeners succeed tolerably well with a few of the English sorts, as described in our last volume, page 275, but ordinary cultivators usually fail with them. It is quite time more attention was given to the production of new American seedlings. A few such have been originated, about the earliest of which was the Houghton, illustrated above. This was raised, probably from seed of the native sorts, by Abel Houghton, of Mass., about fifteen years ago, and is thus correctly described by Cole, in his *American Fruit Book*. "Rather small; oval; skin thin; reddish brown; flesh very fine, tender, sweet and superior, particularly for the desert. A prodigious grower and great bearer. Hardy; the only kind (at that time) free from mildew. Habits like Crown Bob. The best kind for general culture." Since this variety was originated, one or two new seedlings have been produced which give as good promise as the Houghton. They are all of very easy culture, and can be propagated rapidly by layering the branches.

### Our Native Spruces.

A correspondent asks, if there are, indeed, three varieties of Native Spruce, viz.: the Black, Red and White?

We reply that the Hemlock should have been included in your enumeration, for it is a veritable Spruce. But to your question: Some botanists make a distinction between the red and black, admitting, however, that the difference is so slight as hardly to be worth making. Dr.

Gray, of Cambridge, says: "Probably the red, white and black spruces are forms of one species." Downing says: "The black, or double spruce, sometimes called also the red spruce, is very common at the north," etc. The White he considers quite distinct. Loudon speaks of the three as distinct, and goes on to describe them at length. (See his *Encyc. of Gardening*, p. 1170.) The seeds and cones of the red and black are so nearly alike, that a difference is hardly discernible. Mention is made in some books, also, of "the Yellow American Spruce." In our own view, the black, red, and yellow are the same variety, modified by difference of soil, latitude and exposure. But the White Spruce is plainly distinct. Its foliage is silvery, greyish, like the common Juniper, and it surprises us that the difference is not apparent to every eye.

### Evergreen Trees from Seed.

Seeds of evergreen trees, as purchased in a dry state at the seed stores, do not germinate freely. Nature sows them soon after they are ripe, covers them lightly with the falling foliage, where they are partially shaded after vegetating, which is not always the first season. Follow these hints as near as may be, sowing the seed, or putting it in boxes of earth as soon as ripe, in the Fall. If dry seed is purchased in the Spring, soak for twelve hours in tepid water before sowing, cover lightly with scrapings from the woods, or with muck, and shade from the hot sun when up. If they do not vegetate during the Spring, pull the weeds in the rows and leave for another year. A hot-bed, propagating house, or prepared frame covered with glass and under entire control, are better places to start them in. After the first season there is little difficulty in rearing them. In ordinary cases, it is preferable to purchase young trees from those who understand rearing them.

### Working the Soil around Fruit Trees.

This is beneficial if properly done, otherwise not. The careless gardener strikes his sharp spade sheer down among the roots, cutting off the fibers, and doing vastly more hurt than good. If the roots near the top of the ground are cut off, other roots are caused to strike down into the cold subsoil. Hence come late, succulent growths of branches, which are sure to be winter killed. Instead of this rough treatment, keep the surface loose with a hoe, and mulch it in Winter with coarse manure.

### Coal Ashes for Walks.

Probably the very best way to make a walk for the garden or pleasure ground, is to excavate the soil one foot deep, fill up with small cobble-stones or broken bricks and stones, cover with a layer of coarse gravel, and finish off with a coat of fine gravel, rounding over the same in the middle, and rolling it hard with an iron or stone roller.

But in some places, good gravel is scarce, or difficult to be got at. As a substitute for this, we would recommend coal ashes. Make the usual solid foundation of pounded stones, then spread on the ashes, finishing off with a thin layer of fine gravel or sand, giving the whole a thorough rolling. These ashes are abundant everywhere, are so cheap that they can often be had for the carting away, they pack well on a walk, sometimes becoming as solid as stone, they wash on a side hill walk much less than common grav-

el or sand, they are seldom injured by frost, and last, but not least, weeds will seldom grow through them or upon them.

### Usefulness of Soot.

This article is often wasted, being thrown into the ash-heap, or dumped on the ground at the back-door, and no use made of it. Both science and experience show that it is a valuable manure. If used as a top-dressing to grass, it produces a marked effect. When sown broadcast, some of its ammonia becomes volatilized, and is wasted in the atmosphere. Therefore, it should be mixed with water, and applied as liquid manure. Twelve quarts of soot to a hogshead of water make a powerful fertilizer. It may be applied to peas, asparagus, strawberries, raspberries, and to nearly all growing crops.

If farmers and gardeners more generally considered that all fertilizers are more useful, when first reduced to a liquid state, they would take the trouble to bring various manures into this condition before applying them. "They do these things better in Spain,"—certainly they do in England.

### Inexpensive Household Ornaments...V.

#### PRESERVING FLOWERS.

Flowers are always welcome embellishments of the dwelling. Many, however, for want of proper conveniences, or of time for their care, must forego the pleasures of the conservatory or the flower stand. To such, and to all lovers of the beautiful, the following directions for preserving flowers in their natural forms and colors will be of interest. We found an account of the method of preparing them translated from a foreign journal, in the *Gardener's Monthly*. We have not tried the process, but it appears feasible, and is at least worth an experiment.

Procure a quantity of fine sand, and wash it until all the soluble particles are gone, and the water runs from it quite clear. Then spread the sand upon a clean surface, and expose it to the sun or the fire, until perfectly dry. Next pass it through a fine sieve to remove all dusty particles which may have remained after the washing, after which use a coarser sieve to get rid of too large grains. When that is done, your sand should be a mass of fine particles of nearly equal size, as it is for instance in the so called silver sand, used for writing. Keep the sand in a very dry, also if possible, in a warm place, that no vitalizing quality may remain in it.

Now for the flowers—cut them in a fully developed state, taking care that they are neither wet nor moist by dew, rain, etc. If you can not obtain them in any other condition, which is to be regretted, then the following troublesome proceeding will render them dry. Take one or two flowers at a time, and put them into a glass, into which pour just enough water so that the ends can stand in it; the flowers will then dry, and still suck up water enough not to fade.

Next, get a box or a pot, or anything large enough to receive your flower or flowers; pour sand enough into it that they may stand by themselves, their stems embedded in the sand. And now for that job which calls upon your whole skill and your most delicate fingering; don't be afraid though, practice renders that too a comparatively easy matter. You have to fill up the box above the level of the flowers with sand, so that the flowers are completely embedded in it. By means of a tube or a funnel, or a sieve, you can do it in such a way that every particle of the

flower rests in sand, and that your filling up shall not have crumpled or displaced the smallest petal. Of course, such a thing can be done only in a very slow way by a beginner.

And now take care not to shake your box, else the flowers inside might get hurt. Carry it to a place both dry and warm, that all the moisture in the flower may pass into the sand, which being porous, is in turn acted upon and will let the moisture pass entirely out and be evaporated. Avoid, however, positive heat, or the colors of the flower will fade, whilst at too low a temperature the moisture in the flower will not dry quickly enough, and so rot it. The warmth should, as a general thing, never exceed 100°.

When you are sure the flowers have fully dried—a thing which very little practice in touching the box will teach you—the thing is done. Open the box, and by holding it in a slanting direction, let so much sand run out that you can lift the flower by the stem; by turning it upside down, shaking it gently, and if necessary, blowing on it, all the sand will be removed, and you have the flower in its most perfect form. It will be a little brittle, to be sure, in such a dry state as this, and therefore will require careful handling. But a few days' exposure to the atmosphere will have imparted moisture enough to the flower to make it considerably less easily broken.

You now see why we can not do with the larger grains of sand; they would press unequally, and spoil the flower, which forever retains all the marks of such pressure; nor with the dusty particles of the sand, because they, as well as the soluble particles which we have removed by washing, would adhere to the hairy and velvety parts of the flower, would never be got rid of, and would materially impair the original beauty.

### Prepare the Fruit Bottles—The best Method of Preserving Fruit.

Cherries and strawberries, now in the height of bearing, have ushered in the fruit season, to be kept up by raspberries, blackberries, peaches, plums, etc., to the end of the luscious catalogue. Thanks to recent inventions, we may prolong the enjoyment of these cheap and healthful luxuries beyond the few short months of their ripening, and rejoice in fruits retaining almost their natural freshness, when the plants that bore them are shivering in the winter gale, or sleeping under their snowy covering.



Up to the present time we have an abundant supply of a large assortment of last year's bearing, safely kept in the manner described in the previous volume, pages 214 and 310. Before us, as we write, stands a wide-mouthed pint bottle or jar, inverted in a small tin "patty-pan," with cement just covering the rim around the neck of the jar as shown in this figure. In the jar are peaches put up last August, the jar corked, the cap and cement added, and they now look as if just gathered and made ready for tea. Being in clear glass, any change can be readily noticed. Having during the year fairly tested the usefulness of glass vessels for this purpose, we shall hereafter discard tin, or metal of any kind. For many fruits and vegetables tin cans answer every purpose;

and if glass or earthen-ware were not obtainable, we should use tin for sweet fruits as formerly; but the comparative cheapness of glass, the entire absence of injury to the articles by corrosion of the surface, and the readiness with which the condition of the preserves is ascertained, are paramount advantages. No particular form of jar is essential—any bottle with a neck wide enough to receive the fruit will answer. We gave preference to those having a flange about the mouth, and a shoulder in the neck for the cork to rest against, because of their convenience. The addition of the small pan upon the top for holding the cement, and relieving the pressure upon the cork, makes the shouldered neck unnecessary.

The essential points to be observed in preserving in this manner are: 1st, that the articles be entirely fresh. With soft pulpy fruits, as strawberries, this is very important. Many who have been at fault here, blamed the bottles or cans, and us for recommending them. Berries purchased in the market are often from six to thirty hours gathered, or more. Fermentation advances somewhat before it can be perceived by the taste, and when once it has started, is with difficulty arrested. The good housewife sometimes introduces such fruit into confinement, without sufficient cooking—the openings are safely closed, but the "working" goes on. Carbonic gas is generated, "pop" go the corks, and out run the frothing syrup and the housewife's hopes together. Fruits with a firm skin give less difficulty, because their decay does not commence so early.

2d. Sufficient cooking is needed to expel the air contained in the fruit, and to counteract the change which exposure to the atmosphere has produced. The liquid albumen is made solid by boiling, and in this state is not easily fermented. Green corn among vegetables, require the longest boiling; say two to three hours. Skin fruits, as plums, peaches, etc., we have kept without cooking, except that obtained by pouring in the boiling syrup and sealing at once, but a previous heating through is preferable.

3d. Care must be taken to entirely exclude the air. Fill the bottles, raise the liquid to the boiling point, then put in the cork, and make all so tight with cement, that air can not enter. A pin hole left will as certainly spoil the fruit as though the cork were not inserted. Housekeepers should not be discouraged by one or two failures. A few trials will give the necessary practical experience, after which they will thank the *Agriculturist* for commending the fruit bottles. Now is the time to procure a supply.

#### SPECIAL DIRECTIONS FOR PUTTING UP FRUIT.

As a guide to new readers, of whom we have some fifteen or twenty thousand, and for convenient reference for older readers, who may not have last year's numbers at hand, we add the following special directions.

**Berries.** For strawberries, blackberries, and raspberries, take the clean fruit, picked while dry, avoiding washing unless really necessary. Put into a glazed vessel; one of brass will do, but is not so good as an enameled one. Pour over it a hot syrup, made of  $\frac{1}{2}$  lb. to 1 lb. of good white sugar to one pint water. (We have used  $\frac{1}{2}$ ,  $\frac{2}{3}$ , and 1 lb. of sugar with nearly equal success. A good rule is to use about as much sugar as will be required to fit the fruit for eating, remembering that rather more is required when the fruit is to be saturated through, than when it is to be eaten fresh.) A small amount of syrup will be needed to fill the interstices between the fruit, and it need not come up quite to the top at first, as the



fruit will sink down into it when boiling. Carefully cook the berries in the syrup for 12 to 20 minutes, so that all shall be scalded through. Too much cooking destroys the form of the fruit, and dissipates the fine aroma. Heat it through, but do not stew it down. Have the bottles ready heated by the stove, or in water (setting them in, when it is cold, and heating it up), and pour in the fruit with the syrup. This can best be done through a wide-necked funnel, or from a pitcher, to avoid getting the syrup upon the top of the bottle, which would prevent the union of the wax with the glass—a very common error. Fill the bottles not quite to the top of the neck. Let them stand a few minutes, occasionally jarring them a little, to facilitate the escape of any air bubbles left on pouring in the fruit. This, with the partial cooling, will cause the fruit to shrink a little. Now pour in enough more syrup to fill the bottles as high as where the bottom of the cork will sink to. Carefully wipe off any chance drops of syrup that may have been carelessly left upon the neck or top of the bottle, and press in the corks. The corks should be large, and be softened in hot water, so that they will press in easily. Press the corks down upon the syrup. If any syrup oozes through, carefully wipe it all off with a towel dipped in hot water, so as to leave the glass clean for the wax. As soon as the water dries off, dip on the melted cement with a spoon, until the top is well covered. Pour a little of the cement into the "patty pans," turn the waxed neck into it, and add enough more cement to perfectly close the rim of the bottle neck. Remember that water or grease on the neck of the bottle will prevent the firm union of the wax. (We make a long story of these particulars, but they are essential, and easily and quickly attended to, requiring less time and trouble, than to watch the cooking in the old method of preserving.)

*For Cement*, the best we have found is about 1 ounce of tallow to 14 ounces of common resin. This is a cheap compound, the resin costing only 4 to 6 cents per pound at retail. We make up a dozen pounds or so at a time, and keep it on hand, melting it as often as needed.

*Peaches, cherries, plums, apricots, pears, quinces, etc.*, may all be put up in the same manner, and with but very moderate cooking. Apples and quinces of course require paring and coring. They may be cut into pieces of any desired size and form. If in very large pieces, a little longer boiling may be needed to have them heated through, but not cooked soft on the outside. The pits should be removed from peaches; cherries are all the better for being first stoned, and more of them can thus be got into the bottles.

Apples may be stewed into sauce ready for the table, and then be bottled up for use, without further cooking, three, six, nine, or twelve months afterwards. We always put up a large quantity thus, at different periods of the year—in the Winter taking cans that had previously been used for the same purpose or for other fruits.

Any kind of *stewed sauce* may be seasoned, then bottled and sealed, and be always ready for use.

*Tomatoes* we put up largely every year, and have now (in June) a fair supply, as good as if just gathered and cooked. These we skin, cut, and boil down one half, and then bottle up. Prepared in this way they are so convenient, and of so good and fresh quality, that we make no special effort to secure early new tomatoes.

Rhubarb, stewed soft, sweetened as for pies, and bottled, comes out nice and fresh in mid-winter or Spring.

Currants and gooseberries are also similarly

kept, but these should be mature, if not ripe, and be well cooked and sweetened with a strong syrup.

*Green peas, beans, and corn* may also be kept, but they need to be thoroughly cooked before bottling, or they are liable to spoil.

We repeat in closing, that though we have made a long chapter in giving particulars, the process of putting up in bottles and cans, we find to be less trouble and labor, than the old fashioned mode of "preserving" in sugar, while less sugar is required, and a sweetmeat or sauce is thus obtained, far superior in appearance, in taste, and especially in healthfulness.

For the American Agriculturist.

#### Working Butter—Practical Suggestion.

After the butter is removed from the churn, put water in the working bowl, to rinse off the butter-milk. In another dish have cold water and a linen cloth free from lint. Wring the cloth out dry, spread the butter out with the ladle and press the cloth gently on the butter and remove all the drops of moisture. Continue this process until the butter is ready for salting—keep the water clean for rinsing the cloth often. Any one trying this, will be surprised to find how much it facilitates the preparation of butter to salt.

Mrs. H. JESSUP.

Chautauque Co., N. Y.

For the American Agriculturist.

#### Why Saleratus is Used.

But comparatively few bakers understand the chemistry of saleratus, and it is reasonable to suppose that many persons who use it less frequently are equally ignorant why they do so.

When bread is made with yeast, the fermentation that takes place, creates a gas known as carbonic acid. As this forms gradually, and in an increasing quantity, it expands or raises the dough—and this continues until the tenacity of the dough is overcome; when the gas begins to escape the sponge or dough will gradually shrink or fall. This gas expands still more and quicker, if heated, consequently when set in the oven, the loaf of bread becomes larger. If bread be cut, the effect of this gas may be seen in the fine, regular pores or cells. The beauty and perfectness of these cells, will depend upon the extent and completeness of the fermentation, the amount of kneading, and the tenacious quality of that part of the flour called gluten. This is the only gas that is practically made use of in raising bread, cakes, etc., and, as obtaining it by fermentation is a slow, and at times, very inconvenient process, some quicker mode has been found necessary; hence, we use saleratus, for this substance contains the same gas—carbonic acid—combined with *soda* or *potash*, and by using some other acid with it, to take the place of the carbonic acid, or by simply heating it, or any mixture which contains it, the gas escapes and thus "raises" the mixture. The gas, therefore, is all that is wanted, and to obtain it, is the only purpose for which saleratus is used.\* The *soda*

[\* *Soda* or saleratus is very often used simply to neutralize the vegetable acids formed during fermentation. When bread dough stands too long, and gets soured, a little *soda* worked in will sweeten it. So, also, *soda* or saleratus is added to batter for griddle cakes to sweeten them, that is, to neutralize the acid. The goodness of "buckwheats" depends upon the skill of the cook in adding just enough alkali to make them sweet. If too much be added, it can be neutralized by adding a little cream of tartar. When the batter is not sufficiently light, the cakes are improved by adding both *soda* and cream of tartar.—Ed.]

or *potash* remains in the mixture, and physicians generally consider it unhealthy; but "doctors will differ." There is, comparatively, but little saleratus made from *potash*, most of it is from *soda*, and its chemical name is bi-carbonate of *soda*, or *potash*, as the case may be. That which is made from *potash*, supposing it to be a pure article, will contain in 91 parts, or ounces—44 ozs. of the gas, and 47 of *potash*. If one ounce is used, more than half remains in, and is eaten with the food in which it was placed.

That made from *soda* is the best to use, on one account at least; for while the same amount of gas is obtained, only about 41 per cent is left in the mixture. But, although it has this advantage, it might be unwise to buy the article—labeled "*soda saleratus*"—generally packed in papers and largely adulterated with common salt. Don't be deceived, therefore, by the name "*saleratus*," but purchase the "*Bi carb.*" or *Baking Soda*," whenever you wish "the best the market affords."

In using saleratus—it should always, if possible, be dissolved in milk, or water. But not in hot water, or that above 100° Fah. for the heat of the water, would act the same as the heat of the oven or stove to drive off a portion of the gas.

Neither should it be dissolved in *sour* milk, for the acid of the milk, drives off the gas before it is put in with the mixture. Heat, alone, does not drive off all the gas contained in the *soda*; consequently acids have been used with it. With such additions, if the proper quantity is used, the whole of the gas is liberated; but that which is left in the mixture, is, perhaps, none the healthier. There is, therefore, an advantage in using *sour* milk, but the saleratus should be dissolved in a little water, and the saleratus and milk, brought together in the mixture. A large portion of the gas will even then escape, if not soon placed in the stove and a crust formed.

Tartaric acid, and cream of tartar (the latter containing tartaric acid) are used. Ground cream of tartar is very rarely found pure at the drug-stores; and when pure, its use only leaves so much more useless matter in the mixture, after being baked. Tartaric acid is to be preferred; if pure, it attracts moisture with great avidity—a wet spoon or knife must not come in contact with it; it requires to be kept in a dry place. [We think cream of tartar preferable to tartaric acid for general use; 1st, because the former unites less rapidly, and not fully until heat is applied, so that more of the escaping gas is thus retained within the dough; and 2d, because the double salt (New-Rochelle salt) which is formed by the union of cream of tartar and *soda*, is less offensive to the system than the tartrate of *soda* produced by tartaric acid and *soda*.—Ed.]

About equal portions of tartaric acid and baking *soda* are used, a little more of the *soda* than acid, by weight. They should be dissolved separately. Considering the loss of gas which usually occurs when any acid is used with saleratus, and the small amount which may not be driven off by the heat of the stove, when used alone, there can be no great advantage in using either tartaric acid or cream of tartar. Though there may be both economy and convenience in using *sour* milk. In mixtures containing molasses, bakers generally use about  $\frac{1}{2}$  of an ounce saleratus to each quart of molasses. J. C.

COLLECTING A DEBT.—"Here, take your money. But why did your master write me eighteen letters for it?" *Ans.*—"I suppose because seventeen did not bring it."

## The Editor with his Young Readers.

## FOUNDING IN A LESSON—A BETTER WAY.

"What are you doing Emma?" we asked the other day of a young friend, whose singular conduct excited our attention. "Learning my lesson sir," replied she. We could not help laughing, for her motions indicated any thing else than that. She was sitting half bent over near a table on which her book lay; her feet rested on the rounds of the chair; with one hand she grasped the edge of the table and with the other closed tight she was beating on her breast, while she rocked back and forth, and repeated the words from the book, over and over again, in a mumbling, half singing tone. She looked as if she might have been performing worship to some strange idol, or punishing herself for the faults she was confessing. The idea of *pounding* the words of a lesson into the memory was somewhat new, though we had seen schoolmasters accustomed to work on that principle—without much success, however.

We have seen other children make similar odd motions while trying hard to learn a lesson. The only reason we can imagine for this, is that in their earnestness, they get up an extra amount of mental steam, which has to be worked off somehow, and the head, hands, and feet are accordingly set in motion. Now, when persons *think deeply*, the effect is usually to make them very quiet. You may have noticed your little brother when his mind was intent on some thought, how he sat looking earnestly without moving; he appeared to see nothing around him, though his eyes were opened wider than usual; and you spoke to him several times, perhaps, before he heard. He was completely lost in thought. We have a friend who often passes acquaintances in the street without noticing them, and some have thought him either very rude, or too proud to speak to common people, when, in truth, his mind is too busy with thought, to notice outward objects—when not thus engaged, he is a most genial and social companion. For this reason, when we see a child studying as Emma was doing, we conclude there is not much thought in the matter, only a violent effort to get the words of the book in the memory, so that they can be repeated. That is, perhaps, better than no lesson, but not the best way. When you wish to gain knowledge from a book, first ascertain exactly what the words and sentences mean. Take the writer's thought, and make it your own, so that you can express it clearly in your own words. If this can not be done without help, ask an explanation from some one who understands the matter. Then, when you have the thought, get the *words* of the book, as they will usually express the idea better than yours can. By this means you will know what you are talking about, when you recite. The thought required to learn a lesson in this manner, will require all your mental force, and leave none to be expended in the pounding and mumbling process. Words committed to memory without being understood, are like nuts swallowed whole; they may rattle in the mouth but they give little pleasure and no nourishment.

## AN AMUSING GAME.

Many of the games played by young people are not only silly but otherwise objectionable. It is not necessary to make hard study of amusement, but there should be enough of thought mixed with the fun to keep it from being nonsensical. We should be happy to receive descriptions of any new games of this kind. Among the games which call for ingenuity and thought, we have seen great merriment caused by the following, which may be called, "pantomime rhymes." Three, four, or more actors are chosen, who consult together and select some word, to which rhymes can readily be found. For instance, the word chosen is *ditch*. Then each performer must, in his turn, act out a word rhyming with *ditch*. The first player may come in and display his pocket book, count his money, and try to show that he is *rich*. The second can amuse himself and the company by taking pennies, and showing them how to *pitch*. The third can perform the motions made in consequence of the *itch*,

and another can represent a *witch*, etc. This is all to be done by the actors without speaking, while the company endeavor to guess the word selected, and the rhymes that have been acted. When this is done, another word is taken, and the rhymes performed as before. The interest of the game depends upon the words selected, and the ingenuity of the players in acting out their parts.

truly noble are those who practice self denial for the good of others—that we take to be the moral of this picture fable.

## A GREAT AFFLICTION.

A friend of ours, whom we will call John, was noted, when a boy, for his love of music—he is pretty full of it to this day. He was an accomplished whistler, and from morning until night, you might hear him merrily pouring out his happy feelings in strain after strain of melody. Songs and hymns, operas and jigs, everything that he had ever heard sung or played, was brought out in a manner that the birds might envy. One day, in haying time, he was passing from a field just finished, to spread the hay in an adjoining lot. He was whistling away as if his life depended on it, when, just as he mounted the fence, a humble-bee, whose nest was near, took a "bee-line" for his face, and stung him upon the upper lip. Although the pain was pretty sharp, he did not mind it much, but went on with his work. Shortly after, one of the men at work pitching off a load of hay, heard John enter the barn, sobbing and crying bitterly. "Why, John, what's the matter?" he inquired.

"I—I—can't—wh—wh—whistle!" sobbed out John. The pain he could endure, but when the swelling of his lip prevented his whistling, it was more than he could bear, and he was only comforted by the assurance that his lip would soon be all right again. It may appear a trifling thing for a boy to feel sad about, but we think it would not be a small matter to lose the power of whistling. Somehow, work goes easier when it can be performed

to the sound of music, and we know that when troublesome thoughts come into the mind, they can often be blown out with a vigorous whistle. Our apparatus for this work is not as much used as formerly, but even now it is often a real luxury to pipe out a lively tune.

## THE FLAMINGO.

Not a very graceful bird, surely, but his beautiful plumage in some degree makes up for his awkward form. What can be the design in giving him such long, slim legs and such a reach of neck. It was for some special purpose that he has been furnished in this manner, for the Creator makes no mistakes, and adapts every thing to its proper use. Looking at the feet, you observe they are webbed, like those of a duck or goose, which shows him to be a water fowl. He does not swim, however, but wades, and the form of the foot prevents his sinking deep in the soft mud. Now you can see the use of his long legs. They are like stilts to enable him



to pass readily through the water, and being up so high, he can also discover fish at some distance, and approach them unobserved. Of course he should have a neck to match the legs, otherwise he must kneel down to eat, and while he was taking this position, the fish would dart out of reach. Perhaps the most curious part of this bird is his bill. It appears as if broken or badly bent. This, however, is an admirable contrivance for his convenience. When securing food he bends his neck down



THE BENEVOLENT CROW.  
(Original sketch for the American Agriculturist.)

## CHEAP GENEROSITY.

What have we here? A crow seated on a cornstalk, ready to make a good meal from the nice plump ear before her; and a very intelligent and accomplished, though humble appearing squirrel looking on very wistfully. See here, Mr. Artist, in what country do you find squirrels that walk on two legs and carry baskets, and hold conversations with crows? Ah! yes, we understand; these surprising animals belong to the same region where Professor Frog and his music pupils live—out in dream-land. Though we have not much faith in dreams, we know such visions as this usually mean something. Old Esop was a famous dreamer of this sort. He heard birds, animals, plants and objects of all kinds converse, and there is much sound sense in their talk as reported by him. Suppose we listen a moment, and let the crow and the squirrel in the picture tell their own story.

Squirrel.—Fine morning this, Mrs. Crow.

Crow.—Somewhat warm for your fur jacket and tippet I should think.

Squirrel.—Rather, it is true, particularly as I have to work so hard.

Crow.—Providing for the family, eh?

Squirrel.—Yes, the four little ones, with their mother, take a world of feeding.

Crow.—Can I assist you in any way?

Squirrel.—If you will please to fill my basket with corn, it will help me much; my teeth are getting poor; I have nearly worn them out upon the hard butternut shells.

Crow.—I shall do so with pleasure. It makes me happy to give to the deserving; indeed I think generosity one of the highest virtues, and I am always willing to give where I can conscientiously.

There! did you ever hear greater impudence? That thieving bird setting herself up for virtue, and prating of generosity! Goodness must be cheap in dream-land if this is a specimen. The crow is quite willing to bestow liberally of what costs her nothing, and to get a reputation for benevolence by giving away a portion of her stealings. "Softly there" whispers our artist "the crow has lived so long near the dwellings of men, her good qualities have been corrupted." That sounds harsh, does it not? but when we observe how hard it is for many persons to do a favor when it costs them something, and how ready they are to be generous with other people's money, we think he may be at least half right. Is there any of this *crow generosity* among our girls and boys? Is it easy for you to be liberal if father will find the pennies, but very hard, when you must get them by your own efforts? The



so low, that the bill is almost inverted in the water, and the crooked upper half of it then forms a spoon with which he scoops up his meals.

There are five or six species of these birds inhabiting the warmer parts of the globe. They are often found in considerable flocks near the sea shore and in marshes. When they are feeding, one stands as sentinel, and gives notice of approaching danger by a trumpet-like noise, at which all fly away in a wedge shaped flock, in the manner of wild geese. The American Flamingo is about four feet long from the bill to the end of the toes. The wings spread about five and a half feet from tip to tip, each wing being about sixteen inches long. The feathers are of a bright scarlet color, the quills black, and the legs red. They are very shy, but are said to be easily tamed. Their nests and manner of setting are peculiar. A hillock of mud is raised about two feet high, two or three eggs about the size of a goose egg are laid in a hollow on the top of it, and the female sits, standing over it with one foot in the water. The American Flamingo is found in the West Indies, in Florida, and Alabama, but rarely north or west of these points.

#### HOW TO TAME BIRDS, ETC.

We never see a bird or a squirrel in a cage without unpleasant thoughts. Freedom is natural, and confinement irksome to every living creature. The lower orders of animals may not have thoughts as we do, but they have feelings and instincts which give them pleasure or pain, and an unnatural life must deprive them of enjoyment. If you are fond of pets, try and make them so tame that they will remain with you without compulsion. Almost any creature will become attached to you by kind treatment. A friend of ours relates an incident in illustration. At the Greenwich Hospital in London, where disabled and invalid naval officers and sailors are cared for, those not confined by severe illness, are at liberty to amuse themselves in any proper manner they choose. One old veteran was frequently seen to gather a handful of crumbs when leaving the dinner table, which he carried to his room. A friend accompanied him one day and witnessed a pleasing sight. He spread the crumbs upon the window sill, and then drummed pretty loudly with his fingers upon the glass. He said he was drumming his "Sparrow call." It was speedily answered by a dozen or more of these little birds, who came fearlessly and eagerly around him, and gathered up the food he had spread.

The same friend tells of a kind hearted baker in London, who used every day to scatter the crumbs left in his cart, upon his grass plot, for the birds to pick up. The sparrows soon became acquainted with him, and when he went out with his cart to distribute bread to his customers in different parts of the city, a flock of these birds hovered about him, accompanying him on his round, waiting for their daily meal.

Try such an experiment with the birds of your neighborhood. Scatter crumbs or seed somewhere near the house, in the same place every day. The little chirpers will soon find it out. Then, never frighten nor molest them, and they will soon give you their confidence. How much more pleasure this will afford than to shoot them, or to confine them in cages. Try it.

#### A FOURTH OF JULY SPEECH.

One of our young friends writes as follows: "Mr. Editor I would like very much to make a fourth of July Speech, if I could only get an audience. Can't you set me on the editorial stump and let me have a talk with my *Agriculturist* cousins?" Yes John, step up here, take your stand on this three legged stool, hold up your head, face your audience of a hundred thousand girls and boys and out with your speech. Hear him.

"Hurrah for liberty! Three cheers for independence!! Columbia forever!!! I have a small voice, but it is full of my heart, and it shall come to you, like an electric spark falling on powder. Who is so dead that his pulse does not beat quicker on this birthday anniversary of the nation? If there be one, find him out, fill his pockets with powder and his hat with gas, tie him to a bundle of rockets, touch him off, and send him up to get a new view and an exalted idea of the glorious land he is now unworthy to inhabit. But I leave him to his fate and return to you who do exult as Americans should.

When the seed breaks forth from its prison in the early year, the Spring rejoices, and men are happy at heart; but the fullness of joy comes when the harvest waves over the field. The world rejoiced when, in 1776, our forefathers declared their independence. It was the young growth of Liberty. To-day we are reaping the fruits of that Spring time, and our joy overflows from swelling hearts. This country then was like a farm with here and there a field planted. There were scattered villages, full of life and promise, but few in number, and far between. What a crop has been raised from that small beginning. They had strong roots, those noble men that fastened to the soil. They were God-fearing, liberty

loving men, and from those roots have sprung the blossoms and the fruit of the intelligence, the prosperity and the happiness of our day. They had to fight hard, but they were brave because they were good, and what they won we enjoy.

I hope the day of fighting with powder and ball has passed, in this country at least, and that we may always use our ammunition in fire crackers and rockets, and big guns, as we do to-day, without hurting any body, but I tell you my young friends the world's great battles are not over yet. We've worse enemies to overcome than our forefathers met on Bunker Hill, Saratoga, and Yorktown. Ignorance, selfishness, and vice are working at the foundations of our prosperity like rats gnawing off the beams of the building that shelters them. Every one of us that grows up uneducated, or a wrong-doer, or selfish, or mean, is cherishing an enemy of his country. Oh! If I could to-day bring out the biggest gun ever made, load it to the muzzle with knowledge and goodness, discharge it into the heads and hearts of these troublemakers of the country, is there a boy that wouldn't give a light, or a girl that wouldn't, if necessary, give me her new dress for wadding. But it can't be done in that way. We must meet these enemies, book in hand, in the school-room; we must shame them out of the land by good examples of truth-telling, of generosity and love, we must fight our battles hand to hand in our own lives, by resisting and overcoming every bad habit, and if each will overcome himself, then will all have a good time together, and be able to shout *liberty and independence forever!*

Bravo! John. We nominate you for President in the year 1900, and hope there will be enough like you to secure your election.

#### A BAD CROP TO CULTIVATE.

"He's only sowing his wild oats" said a man, when told of some piece of willful mischief which his unruly son had been doing. This he counted an excuse, or at least a palliation for the offence. He appeared to think it necessary that young people should pass through several years of thoughtless, reckless misconduct, after which they would "naturally steady down, and come out all right" as he expressed it. Do you suppose he brought up his colts on that principle. Would he allow and encourage them to bite and kick, throw fences, balk in the harness, or run away with the wagon, expecting them to become good reliable horses when their "wild oats were sown?" Or would he manage his garden in that way, permitting the seeds of dock, thistles and briars to be sown there, feeling certain that, by and by, strawberries, and melons would take their places? Most assuredly not. Will our young friends remember that *wrong done, leaves a bad mark on the character*. If you "sow wild oats" in youth, they will grow up to be a curse in future years. Some one has truly said

"Sowing his wild oats"—aye! sowing them deep,  
In the heart of a mother to blossom in tears,  
And shadow with grief the decline of her years.

"Sowing his wild oats," to silver the head  
Of the sire who watched his first pulse throb with joy,  
And whose voice went to Heaven in prayer for "the boy."

"Sowing his wild oats," to spring up and choke  
The flowers in the garden of a sister, whose love  
Is as pure and as bright as the blue sky above.

"Sowing his wild oats." Aye! cheeks shall grow pale,  
And sorrow shall wither the stump of the wife,  
When manhood thus squanders the prime of his life.

"Sowing his wild oats," Death only shall reap,  
With his keen sharpened scythe; the fruits will be found  
In the graveyard near by, 'neath that grass-covered mound.

#### ABOUT THE PROBLEMS.

Our young friends must have been considerably stirred up by our inquiry if the problems were too difficult for them, and the request that they would send in a string of names. Their letters have come in almost by the peck. Well, the more the merrier—Do it again. The following names were received last month after the first part of the paper containing the problem matters, answers, etc., had been sent to the printer; this accounts for their non-appearance in that number.

No. 10. *Aunt Sue's Rebus*.—Read correctly by S. E. Batchelder, Andrew Hageman, F. C. Adamson, "Reader at Astoria," Lottie O. Chapman, W. J. Spencer, F. E. Pearce, L. B. Camp, E. D. Barker.

No. 11. *Star Puzzle*.—Solved by Henry D. Musser, Edward P. Nichols, Sarah E. Middlemiss, Frank Fargo, H. Clark (The puzzle sent is too generally known to be republished in the *Agriculturist*.)

No. 13. *Rebus*.—Correct readings received from N. H. Walworth, P. H. Freeze, S. E. Batchelder, Thomas T. Bell, Edward P. Nichols, Andrew Hageman, Frank Fargo, James O'Neil, Giles E. Stillwell, S. Hathaway,

"Reader at Astoria," Albert Nye, T. B. Munson, John W. Miles, Jr., Lottie O. Chapman, Simeon Reesor, W. Jay Spencer, Angeline Fullerton, L. B. Camp, H. C. Allen, Sarah E. Middlemiss, A. J. Montagne, George B. Hedges, J. C. Brandon, Wm. Brandon, Hannah C. Bartley, Mary E. Servoss, T. H. Smith, Annie L. Smith, A. D. Neff, Jr., E. D. Barker, C. Barnhart, F. A. Saunders, B. F. Wallis, David T. Osgood, D. W. Webb, Charles D. Bingham, Frank W. Lockwood, John E. Smith, James Waters, C. W. McKelsey, Joseph Clayton, J. O. Hatch, P. Cunningham, S. Scruggs, F. Flum, Jr., Francis W. Puffer, Thomas Almond, E. Hogg, E. Mead, L. W. Ross, Annie Williamson, Eliza Nichols, Arabella Nichols, G. O. Farr, A. H. Edwards, D. Norton.

No. 14. *Anagrams*.—Properly arranged by James Waters, G. O. Farr, Thomas T. Bell, "A Reader at Portsmouth." (Why was the name omitted?) T. V. Munson, Jno. W. Miles, Jr., Osmond H. Jessup, Sarah E. Middlemiss, Hannah C. Bartley, Mary E. Servoss, T. H. Smith, A. D. Neff, Jr., Reuben C. Richard, Wm. G. R. Kieffer, B. F. Wallis.

No. 15. *Arithmetical Problem*.—Answer 5,026 ft. Solved correctly by Sarah E. Middlemiss, Owen Strain, Reuben C. Richard, Mary E. Servoss (with a little help from "Mother," E. Cook, "Reader at Astoria," T. V. Munson, George Elcock, Thomas F. Bell.

No. 16. *The Accountant's Puzzle*.—The meaning of this curious bill was as follows:

John Stouter,	To C. Speedy,	Dr.
To 2 Iron Plows @ \$7.....		\$14
1 Wooden do (one wouldn't do).....		7
This deducted, leaves.....		7
to be paid for the one that "would do."		

Correctly answered by J. Stokes, Jas. A. Bergen, Franklin Adams, and by an anonymous correspondent who adds:

"John's plows, the lazy worthless lout,  
Were too 'Stouter,' but were not *stout*—  
Charlie's grass was growing seedy,  
So he wrote him thus: 'can't you C! Speedy!'"

No. 17. *Anagrams*.—The following are the correct transpositions.

Flit on cheering angel.	Florence Nightingale.
A nice cold pie.	Encyclopedia.
Comic trade.	Democratic.
Nay I repent it.	Penitentiary.
Spare him not.	Misanthrope.
Moon Stares.	Astronomers.
Golden Land.	Old England.
Nine thumps.	Punishment.

Partially answered by Wm. P. Rochenour and Nelson More.

#### NEW PROBLEMS.

**K U U**  
**P E A C E**

No. 18. *Original Rebus*, contains very good advice. We think this a real puzzler, perhaps you will find it otherwise.

No. 19. *Puzzling Bill*.—Contributed by Frank Fargo.

Half All	To Ha Owl	Dr.
To anasafada.....		50. 6d.
to getinonimom.....		25. 0
		75. 6d.

What sense can you make of that?

No. 20. *Arithmetical Problem*.—How long will it require to plow a plot of land 20 rods square, the furrow to be ten inches wide, and to cut clear through the corner each time, the team to walk one mile and a half in an hour, and a half minute to be allowed for turning each corner?

#### CONTRIBUTED PUZZLES.

Many of our young friends have kindly contributed rebuses, enigmas, charades, and puzzles of various kinds, and have, perhaps, wondered that they have not been printed, or at least that no mention has been made of the fact. We always examine such favors very carefully, and if they are of the right stamp, and original or new, are glad to publish them, and to give credit to the authors. We have stacks of letters containing puzzles that were no doubt new to those who sent them, but which we have often seen in print, and it would occupy too much space to give explanations for not publishing in every case. You know the *Agriculturist* is for the benefit of the whole family, and should contain what will be of general interest. It is a very pleasant intellectual exercise to construct puzzles, but to originate a really good one, usually

requires considerable practice. Do not be discouraged, therefore, if your first attempts are not printed, and please don't scold if your letters appear to be unnoticed. When somebody invents a reading, writing, and thinking machine, we hope to be able to answer all our letters personally.



Into which are thrown all sorts of paragraphs—such as NOTES and REPLIES to CORRESPONDENTS, with Useful or interesting Extracts from their Letters, &c., &c.—to be drawn from as we have room left here.

#### Kinds of Grapes and Number per Acre.

—J. L. Neyman, Guernsey Co., O. The number of vines per acre must depend upon the method of training. Some cultivators plant in squares 6 feet apart (1210 per acre), while others prefer 8 feet (680 per acre). In some of the vine growing districts of Europe they are set 4 feet distant each way (2722 to the acre), and trained to stakes about five feet high. Your selection of equal quantities Delaware, Diana, Concord, and Hartford Prolife is not a bad one. The Delaware is still held at such prices, that planting many of them is costly. The Isabella and Catawba are still valuable sorts in many localities. Bright's Grape Culture (50c.) will give you valuable information.

#### Designating a Grape.

—J. S. Nixon, Franklin Co., Pa. It is impossible to tell the name of your grape from the description given. Excepting with the well known marked sorts, such as Isabella, Catawba, Rebecca, etc., to distinguish the variety even from the wood, foliage and fruit, much less can one recognize a new sort from a mere description.

**Cranberries thrown out by Frost.**—B. Ryan, New-London Co., Conn. If possible, flood your cranberry plot late in the Fall, and leave the water on, until freezing weather is over in the Spring. This can probably be done, as you say the land is low and wet. If it can not be flowed, the plants must take their chance—probably enough will remain uninjured to produce a fair crop.

**Cauliflower.**—D. H. Wells, Suffolk Co., N. Y. The cauliflower looks much like a cabbage while growing. Instead of forming a compact head of leaves, it spreads out into a flat, or oval shaped head of "flowers," which somewhat resemble coral in appearance. Cook as cabbage, only not quite as long. They are usually esteemed a luxury.

**Quince Stock for the Pear.**—J. Borland, Bucks Co., Pa. There is a real difference between the common (orange,) Angers, and Portugal quinces. The Angers stock is the one used by nurserymen for budding the pear upon.

**Cypripedium pubescens.**—Wm. L. Burton, Edgar Co., Ill. From the pencil sketch and description you forwarded, we judge the plant alluded to is the Cypripedium, or Moccasin-flower—probably *C. pubescens* (Large Yellow Lady's Slipper) or possibly *C. spectabile*, usually found in moist places under the shade of trees. We have transplanted it with some success, but it needs shade in the flower border.

**Plant from Seed found in Coffee.**—Philip Withman, Beckersville. It is not easy to name a plant from the appearance of the leaf alone. The one forwarded resembles some species of fig, but the flowers are necessary to determine accurately. See the article "Naming Flowers," on page 210 of this number.

**A Singular Leaf.**—J. A. Anderson, Hunterdon Co., N. J., sends us a *lusus naturae*, found in his garden. A large cordate (heart-shaped) leaf resembling rhubarb, has springing from the main rib at its base, a stem an inch and a half high, bearing a small leaf of an entirely different character, being peltate (shield shaped), quite similar to the leaf of the nasturtium. The phenomenon is unexplainable. Extraordinary growths of this kind called "sports" are due to peculiar circumstances often beyond detection.

**Lily of the Valleys.**—P. P., Pottsville, Pa. This plant mentioned in the Song of Solomon, is belived by some commentators to be identical with the Egyptian Lotus or the Nelumbium speciosum mentioned on page 209 of this number of the *Agriculturist*. The glowing account given of the "Huleh Lilly" by an author who supposes

it identical with the "Lilly of the Valleys" is probably partly due to his lively imagination, and desire to make a readable work.

**The Honolulu Squash.**—Several inquirers. We have specimens of this highly praised variety under cultivation, and shall be able to give a definite opinion of its qualities after full trial. The vines now appear hardy and promising—the fruiting will decide whether it is worthy of introduction to our list for distribution.

**Spelt Wanted.**—We have had repeated inquiries where seed of Spelt or German Wheat can be obtained by parties who wish to experiment with it in districts infested by insects preventing success with other grain. Those having a supply, should advertise the fact—in the appropriate pages—we can not introduce business announcements into the reading columns as some desire.

**Destroying Cut Worms at Night.**—J. M. Rose, Clearfield Co., Pa., after trying various remedies proposed for the cut worm, cleared his garden of them by examining each plant several evenings by candle light, and crushing them with a pair of pincers. As they commit most of their depredations in darkness, this is more effectual than seeking them in the morning, besides saving a night's destruction, which is considerable where they are plentiful. The pincers relieve from the disagreeable work of handling the worms.

**Insect Wanted.**—Will "Y. Z." of Cincinnati, who sent "C. T." of Norwich last July some twigs of grape vine, inclosing a small brown beetle, watch for any appearance of the same, either in the larva or the perfect state, in the same location where he found them last year, and send them to the above direction. He would confer a great favor.

**Acid for Insect Specimens.**—Alexander Houston, Franklin Co., O. Entomologists use Prussic Acid, one of the most virulent poisons known, for killing insects to be preserved as specimens. The point of a needle is dipped in the acid, and inserted in the body of the insect near the wing. This requires great care in handling, and is unsafe to keep where children or inexperienced persons can have access to it. We prefer to use chloroform. A few drops upon a sponge, placed in a tight box with the insect, will soon put him asleep beyond awaking.

**Where the Borer Works.**—T. Cooke, Winnebago Co., Wis., writes that the apple tree borer, (*Saperda bivitatta*) does not work at the bottom of the tree, but is found from one to two feet above the surface of the ground; and that he has taken out hundreds of them during the past year or two. They will be found as described by him after they have been at work a few months. The egg of the parent beetle is deposited within a few inches of the ground, and the larva when hatched bores his way upward, emerging at length some distance from his first starting point. Mr. Cook thinks the upper side of leaning trees most liable to attacks from the borer. Have any other of our readers observed this?

**Elder Leaves for Insects.**—In answer to the inquiry made as to the usefulness of elder leaves to repel insects, several subscribers state they have found them worthless. S. of North Hempstead, N. Y., writes "What does the striped bug care about smell? Has he any nose? I have tried coal tar, spirits turpentine, soot, guano and elder leaves, and they do no good." They certainly have noses enough to smell out growing vines, as every year's loss bears witness, but whether any of the above articles are unpleasant to their senses, we can not answer. "S." recommends protecting plants with a covering of millinet, or fine wire cloth, with which we agree.

**Specimens of Squash Bugs** sent in by Wm. H. Niles, Ottawa Co., Mich., are named *Coreus tristis* by entomologists. These insects when full grown, measure about six tenths of an inch in length. Their color is rusty black above, and a dirty ochre yellow beneath. They pass the Winter in a torpid state, in crevices of fences, walls, etc., whence they issue on the return of warm weather. They seek the shelter of the young squash and pumpkin vines, and pair and lay their eggs during the last of June and first of July. The young insects puncture the leaves and live upon the sap, which injures or destroys the vine. The eggs are laid and hatch in successive broods, consequently the plants are in danger the Summer through. We know no certain remedy but picking off the eggs and insects by hand. If this is done early in the season, it will require but little time daily, and prevent their multiplying beyond control.

**Seventeen Year Locusts.**—E. A. Tanner, Rockland Co., N. Y., and several subscribers in New-Jersey and other sections, will please accept our thanks for specimens of these insects both in the pupa state and fully developed. Other matters have prevented our giving a full illustrated article on this insect this month. The predictions of their appearance this year have been verified

in many sections heard from, and their abundance has attracted great attention. Entomologists will doubtless improve this opportunity for learning more of their habits.

**The Comprehensive Farm Record.**—We have repeatedly urged upon our readers the great advantage of keeping a complete journal or diary of farming operations. No one who has a well kept record of the kind extending over a few years, would willingly part with it, which is good evidence of its value. The principal objection made to such a work, has been the trouble of attending to it. Much time is required to note all the facts one would wish to remember, and to arrange them systematically for easy reference in future is no small task. A book bearing the title at the head of this article, by Franklin B. Hough, and published by Saxton, Barker & Co., N. Y., in a great degree removes this difficulty. By a very simple system, the pages with appropriate headings are arranged so that notes on farming operations, accounts of various crops, and animals, weather phenomena, comparative forwardness of seasons, first appearance of birds, etc., can be readily entered, requiring but a few minutes time each day. The topics include nearly or quite every thing in farm life upon which observations are requisite or desirable. Of course, only a part of these need receive attention, but many points of value are here suggested that might otherwise pass unnoticed. The price of the work \$3, at first thought, seems objectionable; but though not a large volume, it contains the necessary blanks for use during twenty five years, making the cost but the small sum of twelve cents a year.

**Bees and Bee Keeping.** a book of 286 pages, by W. C. Harbison, an experienced Apiarian, has been received. The practical parts of the work are plainly written, and contain suggestions of value to the bee keeper. The directions for transporting bees to California or other distant points are timely. As every man sees things in a different light, theories will differ, but the author gives his reasons clearly for his own views on disputed points, and in the main treats those differing from him fairly. It is a noteworthy fact that bee writers generally seem imbued with peculiar acerbity in their discussions of mooted questions; whether this be derived from the insects of which they treat, is a question on which we should like to hear their opinion. The subject of bee keeping is of almost inexhaustible interest, and of great economical importance, and we hail every record of facts and deduction from experience by adepts, as an acquisition to agricultural literature.

**Bone Mills.**—J. P. Prescott, Shelby Co., Tenn. The regular bone mills cost \$80 to \$100. We have seen the "People's Mill," \$30 and \$40 sizes, grind bones very well, after they had first been broken up by hand.

**Cause of Glanders.**—E. J. Dodge, Carroll Co., Ill. This disease is highly contagious where horses are exposed to actual contact with an infected animal. It most frequently originates with horses reduced by excessive overwork and scanty feeding. Animals in this condition are in danger of having glanders follow the contraction of a cold, which under other circumstances, would be of no serious consequence. The proper treatment of the disease requires the best veterinary skill.

**Substitute for a Bridle.**—One of our Agriculturist boys sends a description of a contrivance of his own to hold horses with a halter when taking them to water. It consists of a block some two inches square, hollowed on one side to fit the top of the horse's nose, under the nose-piece of the halter, from which it hangs by two hooks driven in the front. Tacks are driven into the hollowed side of the block where it comes against the horse's nose, the heads being left protruding a little. A pull upon the halter brings these against the horse's nose. If we understand the construction, this is objectionable, as being likely to wear and wound the skin which is quite tender on this part. It would be better to take time to use a bridle.

**Measly Pork.**—S. D. Jared, Whiteside Co., Ill. sends an abstract of a pamphlet, for which we have not space, arguing that measly pork contains the larva of tapeworm, and that its presence in man may be caused by eating swine's flesh. The full discussion of the subject belongs to a medical rather than to an agricultural journal.

**Where to Buy a Farm.**—Frederic C. Law, Ozaukee Co., Wis., and others. We could not well decide upon the propriety of a purchase in any section without a personal inspection and investigation of the surrounding circumstances, and no one is safe in buying without using his own eyes upon the tract offered for sale. We have no acquaintance with the new land described in the circular forwarded. A young man "by careful management, and industry" may succeed almost anywhere.

**Will it Pay to Hire a Farm?**—Chs. H. Bliss, Providence Co., R. I. Sometimes, yes, sometimes, no



If a man have practical skill, sufficient capital, and can secure favorable terms, there is good prospect of success. If he has had no experience in the business, the chances are against him.

**A Mowing Machine Trial of the Right Kind.**—The trial of mowing machines and reaping machines, announced to be held at Providence, R. I., June 26, by the R. I. Society for the Encouragement of Domestic Industry, strikes us as having been got up in the right way. The announcement says: "It is the intention of the Society to furnish an opportunity to test the relative merits of different Machines in the presence of all persons interested, but no premiums will be awarded, and no discriminating report will be made at the close of the exhibition by the committee superintending the same." This is the true way. Let there be ample opportunity for every manufacturer to show what he has to offer; and then let every farmer be his own judge of what is best for his purpose. The judgement of the mass will be better than that of a small committee, and often avoid bickerings and complaints of unfairness, or partiality.

**Gooseberry Show at Patterson, N. J.**—This novel show of great gooseberries is appointed on July 16th. The weighing will begin at 3 o'clock P. M., at George Parrott's, 301 Straight-st. As large as were the berries last year, they are expected to excel this year.

**Agricultural Library.**—We are glad to learn from Mr. Chas. J. Elliott, that the Montgomery County (Pa.) Agr. Society have just established a library for the use of the Society, and voted an annual appropriation of \$100 to keep it supplied with agricultural and horticultural literature. Such a library would be valuable in connection with every town and county association. If kept at a central point, the members could draw out and exchange over books several times during a year, and a few books would be used by a considerable number of persons, who might not perhaps purchase them for their own individual libraries. The Library of the Montgomery Society, is to be kept in the new and spacious village Library Buildings at Morristown. Mr. E. gives especial credit to Col. Thomas P. Knox, Pres. of the Society, for active and efficient efforts in getting up the Library.

**Use of Old Plaster of Paris.**—We have inquiries from several Dentists, and Stereotypers, as to the value of Plaster, after it has been used in making molds. Ordinary ground plaster, such as is used on soil, contains considerable water. Calcining, or burning this drives off the water, and it is then the material used for making plaster casts of various kinds. On wetting it, it takes back the water expelled by heat, and hardens. It is then of course like the original unburned plaster, and may be used for the same purposes in cultivation. The only difficulty will be to pulverize or grind it, which will be necessary after it has become hardened.

**Tarring Shingles.**—E. Y. Palmer, of Hillsdale Co., Mich., writes that he is about to use white-wood shingles, and proposes to saturate them with tar, by heating it in a kettle, and letting the shingles lie in it until the tar is thoroughly soaked in. This would seem to be an excellent plan. We have had no experience or observation of such a practice to judge from. Perhaps some of our readers have tried the plan, and can speak of the results.

**Church for Deaf Mutes.** The amount forwarded to this institution by a reader at Norwalk, has been handed to Rev. Mr. Gallaudet, the Rector. One feature connected with this enterprise is worthy of notice. By the efforts of the rector, who is continually engaged in their behalf, places of employment have been procured for a large number of this afflicted class: so that the work of doing good to the bodies as well as the souls of men is not neglected. The parties interested, have already obtained possession of the church, and by help of the benevolent, it will, we trust, be made a permanent institution.

**Knitting Machines Wanted.**—D. H. H., of Montgomery Co., Md., asks where these can be obtained, and at what price. If there is a really good one in the market, the manufacturer would find it to his interest to advertise it.

## The Premiums Still Open.

[FOR SPECIAL PREMIUMS SEE LAST PAGE.]

[The premiums below are offered for subscribers to Volume XIX of the *American Agriculturist* whenever received. Those having partial lists made up can complete them, and other new lists can still be formed.]

Every person collecting names for premiums, can send in the names with the money as fast as received, so that the subscribers may begin to receive their papers; but if designed for premiums, a double list of each lot of names should be sent, one of them marked at the top,

"For premiums," and with the name of the sender. Any premium will be paid as soon as the list for it is completed, if we have the duplicate lists to refer to.

**Premium VI.**—Every person sending 30 new subscribers at 80 cents each, will be entitled to a silver-cased pocket Microscope—with Coddington lens. Value \$4. Sent by mail securely packed and post-paid. (See Premium 18.)

**Premium VII.**—Every person sending 45 new subscribers at 80 cents each, will be entitled to a copy of the large new *Pictorial Edition of Webster's Unabridged Dictionary*. Price \$6.50. It weighs 8½ lbs, and can go by express, or be sent by mail at 1 cent per ounce within 3000 miles, or 2 cents per ounce over 3000 miles.

**Premium IX.**—Every person sending 144 new subscribers at 80 cents each, (or 100 at \$1 each), will be presented with one of Wheeler & Wilson's best \$50 Sewing Machines, new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly two years' use in our own family. We want no better.—The machines will be selected at the manufactory, be well boxed, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using, go with each machine.

**Premium XII.**—To every person sending 130 new subscribers at 80 cents each, (or 95 at \$1 each), we will present Appleton's *New American Encyclopedia*, now in course of publication, consisting of fifteen large volumes of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Eight volumes are now ready, and the remaining seven will be furnished as fast as issued. Price, \$45.

**Premium XXVIII.**—Having proved the accuracy and convenience of Kendall's new and improved *Portable or Aneroid Barometer*, we propose one of those instruments as a premium to any person collecting and sending in 66 subscribers to the *American Agriculturist*, at the lowest club price, 80 cents each, or 33 subscribers at \$1 each. These barometers in form resemble a large watch, or small round clock, with the varying pressure of the atmosphere indicated by an index upon a dial plate. Each instrument is packed in a neat leather case, and can be carried about readily, and be hung up wherever desired. They are just as accurate as the long, inconvenient mercurial barometer, and every way a more desirable instrument for common use in predicting changes in the weather, marking the height of a place above the level of the sea, etc.—Price \$10.

For other Premiums see last month, page 187.

## Business Notices.

Sixty Cents a Line of Space.

### A CARD.

#### ITALIAN BEES.

Much interest has been recently awakened in regard to the "Italian Bees" (*Apis Ligustica*), and owing to my incidental connection with the subject, I am in daily receipt of a great number of questions of all sorts, relating to the value of the bees, their origin, the purity of those brought to this country, whether they can be obtained through the government, on what terms they are offered for sale by myself and others, etc., etc. Not having time to respond individually to these various inquiries, I will here give a general statement of my own connection with the bees, and such information as can be condensed in this card, trusting my correspondents will accept this instead of a private letter. In Autumn of 1858, while preparing to visit Europe with my family, I received from the Agricultural Department of the Patent Office at Washington, a request, and subsequently a Commission, to make sundry investigations and some purchases in behalf of the Government. Among other things embraced in my Commission, was an investigation in regard to the Italian Bees, and an order to purchase a few hives for the Department. After some unsuccessful inquiries, in various directions, I placed myself in communication with the secretary of the Paris Apiarian Society, by whom I was referred to a gentleman in constant intercourse with the Valtelin, as the only reliable man from whom to procure the bees in absolute purity. With my letters from the Paris secretary I visited the gentleman referred to, among the Italian Alps, and becoming satisfied of the purity of the bees, I purchased ten swarms—the extent of my commission—and gave full directions for their shipment via Havre, by the steamer Arago, on the 18th of October. Becoming interested in the subject, I also purchased three swarms to be forwarded for my own homestead. I wrote to the captain of the Arago, and to agents in Havre and New-York, giving directions to have special care taken in forwarding them safely. I also paid the seller 33 per cent in advance of his own price, to guarantee their safe arrival, hoping by this means, to secure the greatest possible care on his part. Two months afterward, while in England, I learned by letters from home, that the bees did not arrive by the Arago. I immediately wrote to the seller, and after some time learned from him, that he had thought proper to send them via Genoa. This was contrary to my express orders and the terms of the guarantee. The bees all came dead, and the guarantee remains yet to be made good to the Patent Office and to myself. This will explain why the Department has no bees for distribution as yet; and will give due credit for the efficient and timely efforts made to se-

cure their early introduction at the expense of the government.

The attention given to this subject, and what I learned in Europe respecting these bees, awakened not a little interest, and I concluded to send over a hundred swarms for introduction into the United States. The commission for the Government not allowing this to be done at public expense, as I should have preferred, I bought them on my own account. Ten of these I undertook to bring home with me, and stipulated with the seller to himself come over with the remaining 90 swarms.

Of the 10 swarms brought with me all are now dead. Of the 90 swarms only 17 have yet been sent forward, of which a part died on the way, and only two swarms are now living. These, I am happy to say, are now doing finely, and the progeny being constantly hatched, show them to be of absolute purity. My bee-keeper has had them under his personal supervision since the moment they were removed from their stands in the Valtelin.

Soon after my arrival here in February, the numerous letters of inquiry pouring in upon me, compelled the issue of a circular, stating that I expected a bee-keeper with 90 hives, and that he would "probably be ready to send them out in May...." The non-arrival of a large portion, and the death of part of those coming over alive, of course extinguished this probability, and I issued another circular, stating the facts, and declining to receive any money, or to deliver any bees, before September at the earliest.

Having seen in some of the New-York papers a "challenge" to exhibit my bees, I have only to say that—learning from reliable sources that there was a probability of impure bees being brought from Germany—at the suggestion of several intelligent bee-keepers, I cautioned the public by a card in the last *Agriculturist*, to satisfy themselves of the purity of any purchases they might make, advising them to ask to see a bill of sale from me. This, of course, referred only to such bees, as should be offered as having come from my stock. I have named no parties, and shall not be drawn into a controversy with individuals who may, with or without reason, feel touched by that caution.

If these bees prove to be as valuable to the country, as it is hoped they will, it is of the greatest importance that no spurious or impure stock be disseminated. I am certain that my own bees are pure, and they are under the constant supervision of my German bee-keeper, and also of Messrs. Langstroth, Carey, and Brackett, who are well-known and reliable apiarists, and who take great interest in the enterprise. We are determined not only to guard against impurity or crossing, but also to test their value before they are offered for sale. I do not look for pecuniary profit, but having expended a very large sum in the enterprise, I shall of course desire to secure at least a partial return for the outlay—if the bees prove valuable. If they do not, I shall cheerfully pocket the loss on the experiment.

My original, and present plan, is, to distribute pure queens to reliable apiarists at different points, from which they may be more readily and conveniently disseminated over the country. The only condition I have asked, or expected to ask, is, that those who receive the pure queens from me, either share with me the proceeds of the first sales, or else decline parting with their bees to others during the first year. Only in this way can I hope to receive a reimbursement of my expenses. I have not the least desire or intention of being considered the only importer or propagator of pure Italian bees—indeed, bee-selling is foreign to my legitimate business of growing trees and plants, and I have only been drawn into it incidentally, as above observed.

For answers to the numerous questions addressed to me by correspondents in regard to the management of bees generally, I must refer to the valuable works on this subject by Langstroth, Quinby, Harbison, etc.

SAMUEL B. PARSONS.

Flushing, N. Y., June 9, 1860.

## GROVER & BAKER'S CELEBRATED NOISELESS FAMILY SEWING MACHINES.

No. 495 Broadway, New-York; No. 18 Summer st., Boston; No. 730 Chestnut st., Philadelphia; No. 181 Baltimore st., Baltimore; No. 58 West Fourth st., Cincinnati. \* \* For our own family use we became fully satisfied that Grover & Baker's is the best, and we accordingly purchased it.—*American Agriculturist*.

SEND FOR A CIRCULAR.

## WHEELER & WILSON'S SEWING MACHINES.

"The best in use."—*American Agriculturist*, 1860.

Office 505 Broadway, New-York.

SEND FOR A CIRCULAR.

## Agricultural Exhibitions for 1860.

## STATE EXHIBITIONS.

Name.	Where held.	Date.
National Horse Show	Springfield, Mass.	Sept. 4-7
New-Jersey	Elizabeth	4-7
Illinois	Jacksonville	10-15
Vermont	Burlington	11-14
Kentucky	Bowling Green	18-22
Nebraska	Omaha	19-21
Wisconsin	Madison	24-26
Pennsylvania	Wyoming	22-25
Missouri	St. Louis Agr. and Mec. Ass'n	24-29
Ohio	Dayton	25-28
Maine	Portland	25-28
Iowa	Iowa City	Oct. 2-5
New-Hampshire	Manchester	2-4
New-York	Elmira	2-5
Indiana	Indianapolis	15-20
Georgia	Augusta	22-27
Alabama	Montgomery	29-Nov. 2

## COUNTY EXHIBITIONS.

## NEW-YORK.

Saratoga	Saratoga Springs	Sept. 4-7
Queens	Jamaica	19
Monroe		19-21
Rensselaer	Lansingburgh	19-29
Westchester	Mt. Kisco (New Castle)	25-27
Putnam	Brewster's	25-27
Oneida	Utica	26-28
Ontario	Canandaigua	26-28

## Market Review, Weather Notes, etc.

AMERICAN AGRICULTURIST OFFICE,  
New York, Monday Evening, June 18, 1860.

Heavy as were the receipts of Breadstuffs, reported in our last Review—those of the past four weeks have been much larger. The unusually extensive arrivals have discouraged holders, who have been quite anxious to sell, and have generally reduced prices to tempt buyers to purchase. At one time, an increased supply of shiproom and a consequent decline in rates of freight to British ports assisted sellers in their efforts to dispose of their stocks, as shippers were induced to operate with considerable freedom. During a week or so past, however, freights have again advanced, vessels having become scarce, and there has been decidedly less inquiry for export. The demand from the home trade has been restricted. The competition to sell has had a depressive influence on the market, which has steadily tended downward. The decline in prices of Flour, since our last, has been 15¢ to 45 cents per bbl., or an average falling off of 25 cents per bbl., which would make the loss on the reported sales of the month over \$100,000. This result has been very injurious to holders, whose confidence has been superseded by manifest distrust in the future, and a strong desire to realize immediately. Buyers, however, are purchasing with reserve, as they anticipate a further decline. Shippers allege that there is no prospect of an extensive export movement, unless produce can be obtained here at rates sufficiently low, to afford some margin for profit, on shipments to European markets. The decline in the value of Wheat is still more remarkable than even that in Flour. Our comparative tables, below, indicate a reduction of 10¢ to 15 cents per bushel, and the tendency is toward a lower range. The stock here is large, and as millers are not buying freely, the main reliance of holders who want to sell, is upon shippers. These will only purchase, when they can do so advantageously, there being less disposition to invest at a venture, than was the case early in the year. Their movements are therefore more uncertain this season than usual. Corn has been very irregular, but it is now decidedly cheaper than it was a month ago. The bulk of the available supply is Mixed Western, much of which has been received in very poor order. Rye has been quiet, and Barley has been neglected. The transactions in Oats have been quite moderate. Prime lots, especially of State, are sparingly offered. The average quality of a large portion of the receipts is inferior, as is also the condition in which very many boat-loads arrive. Hence the wide range of prices now current in this market. Cotton has been very dull, and prices have fallen off 1¢ to 4¢ per lb. The accounts from the South are on the whole, favorable. The continued drouth is doing some injury on the high cotton lands, but benefitting the low and bottom lands. The weather has become excessively hot at the South, and highly favorable for the growth of the plant. Provisions have been in fair demand at irregular prices, however. Hay has been more freely offered at easier rates. The sales have been of average magnitude. Hops, Rice, and Tobacco have been in good request. Tobacco has declined slightly. The inquiry for wool in this and the principal markets on the seaboard has been limited. The new clip is making its appearance at various points in the interior, and thither buyers are directing their attention at present. From our advices we infer that prices will open considerably lower this season

than last. The Philadelphia Commercial List thinks that the decline will be 2¢ to 5¢. From the opening rates in 1859. Others predict a falling off of 5¢ to 10¢. An unusually large clip is expected. Ohio, it is thought, will produce less coarse and more fine wool this season than last. Michigan will furnish an increased supply, as it is said that the clip in that State will yield this year between three and a quarter and three and a half millions of pounds of wool, of which about one third will probably grade as high as three quarter and full blood merino. Illinois is looked to for heavier stocks. State similar results are expected from the clip in most other States in which sheep-husbandry receives anything like general attention. It is also anticipated that the competition among buyers will be unusually brisk, and this may help to keep up prices. Commissions to purchase to the amount of over three million pounds are in the hands of agents in Michigan. One man alone has orders to the extent of almost a million pounds. It is stated that the agents of certain manufacturers are recklessly endeavoring to fix prices which will be ruinous to themselves and others. At present, the stock of low grades in the hands of dealers is small; but the stock of finer grades is larger than ever before, owing, in a great measure, to the extensive importations of foreign wools. The stock of foreign wools in the Eastern market is large, and considerable quantities are known to be on the way hither. Other descriptions of Produce have been moderately dealt in.

## CURRENT WHOLESALE PRICES.

	May 19.	June 18.
Flour—Super to Extra State	\$5 15	\$5 00
Superfine Western	5 15	5 00
Extra Western	5 35	5 15
Fancy to Extra Genesee	5 45	5 40
Super to Extra Southern	6 15	6 00
Rye Flour—Fine and Super	3 40	3 40
CORN MEAL	3 70	3 40
WHEAT—Canada White	1 50	1 40
Western White	1 50	1 40
Southern White	1 50	1 40
All kinds of Red	1 24	1 19
CORN—Yellow	75	77
White	78	80
Mixed	70	72
OATS—Western	40	41
Southern	37	39
RYE	87	88
BARLEY	70	72
White Beans	90	1 10
Hay, in bales, per 100 lbs.	1 00	1 25
COTTON—Middle, per lb.	11 1/2	11 1/2
RICE, per 100 lbs.	3 62 1/2	4 50
HOPS, crop of 1859, per lb.	6	13
PORK—New Mess, per bbl.	17 50	18 00
Prime old, per bbl.	13 62	13 75
BEEF—Repacked Mess	8 50	10 50
Country mess	5 00	6 00
HOGS, Dressed, corn, per lb.	7	7 1/2
Lard, in bbls, per lb.	12	11 1/2
BUTTER—Western, per lb.	12	12
State, per lb.	13	12
CHEESE, per lb.	6	11
EGGS—Fresh, per dozen	11	12
POULTRY—Fowls, per lb.	13	12
Geese, per lb.	10	12
Ducks, per lb.	16	18
Turkeys, per lb.	16	17
Wild Pigeons, per doz.	1 00	1 25
FEATHERS, Live Geese, per lb.	4	5
SEED—Clover, per lb.	8	9
Timothy, per bushel	4 37	4 51
SUGAR, Brown, per lb.	6	8
MOLASSES, New Orleans, per gal.	46	50
COFFEE, Rio, per lb.	19 1/2	20
TOBACCO—Kentucky, &c. pr lb.	3 1/2	3
Seed Leaf, per lb.	6	25
WOOL—Domestic, fleece, per lb.	32 1/2	57 1/2
Domestic, pulled, per lb.	27 1/2	47 1/2
Wool—Undr'd Amer'n, pr ton	120	150
Dressed American, pr ton	160	200
TALLOW, per lb.	10	10 1/2
OIL CAKE, per ton	32 00	29 50
APPLES—Dried, per lb.	4	5
Dried Peaches, pr lb. South	4	5
Dried Cherries, pr lb.	20	22
POTATOES—Mercers, p. bbl.	1 75	2 00
Peach Blows, per bbl.	1 87	2 00
NOVA SCOTIA, per bushel	55	60
New Bermuda, per bbl.	4 00	4 50
New Southern per bbl.	2 75	3 50
ONIONS, New Red, per bbl.	5	5 50
TURKISH, New, p. 100 bunch.	3	3 00
CABBAGES, per 100	5 00	6 00
CUCUMBERS, South'n, p. bbl.	2 00	2 25
SQUASHES, South'n, p. bbl.	3 00	4 50
STRAWBERRIES, p. 100 baskets	13	16
LATE, per quart box	6	12
CHERRIES, per lb.	1 50	1 75
GOOSEBERRIES, per bushel	6	8
ASPARAGUS, p. bunch.	2 00	4 50
RHUBARB, per 100 bunches.	1 50	3 00
RADISHES, per 100 bunches.	2 00	4 00
GREEN PEAS, per bbl.	2 00	4 00

## TRANSACTIONS AT THE N. Y. MARKETS.

RECEIPTS.	Flour.	Wheat.	Corn.	Fy.	Barley.	Oats.
26 bus. ds. this mon.	354,578	874,505	2,079,922	26,558	25,288	481,891
27 bus. days last mon.	287,634	174,601	531,820	17,452	25,251	301,377
SALES.	Flour.	Wheat.	Corn.	Fy.	Barley.	Oats.
26 business days this mon.	410,210	1,412,100	2,281,300	36,600	10,300	16,300
27 business days last mon.	367,385	910,500	952,500	35,100	156,900	
Breadstuffs exported from N. Y., from Jan. 1 to June 13.	1859.	1860.				
Wheat Flour, bbls.	280,950	307,358				
Rye Flour, bbls.	3,132	4,209				
Corn Meal, bbls.	38,223	42,888				
Wheat, bush.	21,916	861,622				
Corn, bush.	96,930	1,187,325				
Oats, bush.		95,464				
The receipts at tide-water of the principal kinds of Breadstuffs, from the opening of the Canals to and including the 7th inst., have been as follows:	1858.	1859.	1860.			
Canal open—	April 25.	April 15.	April 28.			
Flour, bbls.	243,610	93,813	165,520			
Wheat, bush.	2,161,682	275,314	1,806,084			
Corn, bush.	499,141	441,342	2,996,744			
Barley, bush.	274,937	114,312	72,013			
Oats, bush.	814,187	1,725,108	1,725,198			
Rye, bush.	89,765	67,161	38,683			

**N. Y. Live Stock Markets.**—THE CATTLE MARKETS have been even more abundantly supplied during the past four weeks than for the month previous. The total receipts of beefs at the N. Y. City Markets for the four weeks ending June 13, numbered 16,744, or an average of 4,186 per week. This is 567 above the average for the same period last year, and more than could be sold at prices which would yield a profit to those who had purchased at the West. Many of these cattle were brought at rates quite as high as could be obtained at the overstocked markets here. The weekly receipts have been as follows: For market of May 23, 4,254 head—trade good, with an advance of 1¢ per lb., estimated dressed weight, over the previous week, May 30, 3,709 beefs, a very large proportion of which were in prime order, and sold a shade better than at the previous market. June 6, 4,666 cattle—too many to sell readily. Sales dragged, at a decline of 1¢. June 13, 4,115 head, which coming in "strawberry time" were more than could be readily sold at a further decline of 1¢ per lb. The sales at this market ranged; for prime beef, 9¢ to 9 1/2¢ per lb., estimated dressed weight; medium, 8¢ to 8 1/2¢; poor 7¢ to 7 1/2¢; average of all sales, 8 1/2¢, or near 1¢ less than one year ago. From present indications there will be no scarcity of cattle during the Summer, as many drovers are still holding their cattle back for higher rates. An unusually large proportion of the above receipts were from the state of Illinois, and showed good feeding.

**VEAL CALVES** have been very abundant during the month, and prices have ranged comparatively quite low. In addition to the large numbers reported, the calves themselves have been quite large, thus increasing the amount of veal. For the four weeks just ended, 5,177 live calves have been received at the regular markets, besides large numbers sold from the boats direct to butchers. At no one market previous to the last could they all be disposed of, although offered at very low prices. They have mainly sold at 5¢ to 5 1/2¢ per lb. live weight, for prime veals, 4¢ to 4 1/2¢ for medium qualities, and 3 1/2¢ to 4¢, for poor. The total sales have been at even lower rates.

**SHEEP AND LAMBS** have come in more freely, the receipts being 33,161 during the month ending June 13th, against 22,906 for the previous month. There has been a steady increase in the supply at each succeeding market, until the last sales day (June 13) when 11,685 were reported for the week—the largest number for any one week since last December. The market was dull and prices declined to 4¢ to 4 1/2¢—with a very few of the best, at 5¢ per lb. live weight for sheep, and 7¢ to 8¢ for lambs.

**HOGS.**—Receipts have been light of late, but sufficient for the diminished demand during the heat of Summer. For the four weeks just ended, 17,472 live hogs have been received and sold at pretty uniform rates, viz.: 6¢ to 6 1/2¢ per lb. live weight, for prime corn fed hogs; 5¢ to 6¢ for light corn fed hogs; and 5 1/2¢ to 5 3/4¢ for still fed. Hogs are now selling as fast as they arrive.

**The Weather** since our last report, (May 18,) has mainly been favorable to vegetation, and crops are generally in a flourishing condition, although the drought, which prevailed in some localities last month (there being no rain for six weeks), permanently injured the hay crop, and prevented corn and late sown grain from vegetating readily. Subsequent rains, however, brought the crops forward, and the late hot weather has caused them to grow rapidly. But a soaking rain would now do great good to all kinds of crops in this vicinity. Our Daily Notes, condensed, read thus:—May 19, warm with showers—20, clear and cool—21, cool with wind and showers—22, showery—23, 24, 25, clear, fine and warm—26, cloudy A. M., heavy rain P. M.—27, cloudy—28, cloudy A. M., clear P. M.—29, clear and fine—30, cloudy, heavy showers at night—31, clear and hot, showers at night; high wind, amounting to a tornado in Western N. Y.—June 1, 2, 3, clear, fine growing weather—4, clear and warm, with showers at night—5, rainy most of the day—6, clear and warm—7, showery—8, clear, fine day with showers at night—9, 10, 11, cool, but fine—12, 13, 14, 15, 16, 17, 18, clear and warm, everything growing rapidly, but rain needed.

**The Tornadoes.**—June, thus far has been prolific in heavy storms and tornadoes in some parts of the country, but mainly at the West. There was a heavy blow, in Western New-York, on the night of May 31, which uprooted trees, demolished buildings, and destroyed a few lives. It was limited in extent. The next was on the 2d of June, and was mainly confined to Western Illinois, and Eastern Missouri, along the Mississippi River. This was a violent wind accompanied by rain and hail, and much damage was done to crops, trees, building and shipping, with some loss of life. But the great tornado, one of the most violent ever known in this country, occurred during the night of June 3d, beginning in southeastern Iowa, thence over the Mississippi into Illinois, and so on into Kentucky, and across North Carolina, on the 4th. The wind was most violent in Lynn Co., Iowa, where several villages were demolished, and hundreds of people killed. A multitude of animals, a large extent of growing crops, and a great number of farm buildings were destroyed.

## Thermometer at 7 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit.) s indicates snow; r rain.]

MAY.											
1.....44	8.....59	15.....48	22.....47	29.....53							
2.....47	9.....49	16.....48	23.....55	30.....55							
3.....50	10.....54	17.....48	24.....56	31.....56							
4.....49	11.....56	18.....53	25.....54								
5.....50	12.....56	19.....58	26.....57	Av'ge 53							
6.....53	13.....58	20.....56	27.....57								
7.....56	14.....58	21.....48	28.....52								
JUNE.											
1.....60	4.....62	7.....62	10.....56	13.....60							
2.....60	5.....61	8.....62	11.....55	14.....62							
3.....61	6.....60	9.....56	12.....58	15.....60							



## Advertisements.

Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.

TERMS—(invariably cash before insertion):  
FOR THE ENGLISH EDITION ONLY.

Thirty-three and one third cents per line of space for each insertion, (three lines for \$1)

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Ten cents per line of space for each insertion.

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Sold on Commission.

Such as Flour, Butter, Cheese, Lard, Provisions of all kinds, Grain, Eggs, Poultry, Game, &c. &c.

ISAAC EMENS, 226 Front-st., New-York.

(SUCCESSOR TO THE FIRM OF HAIGHT & EMENS.)

Refers to the Editor American Agriculturist.

E. R. Cooper, Cashier Market Bank, New-York.

Rev. JOSEPH E. KING, Fort Edward, N. Y.

**HAVE YOU A SON OR DAUGHTER**  
TO EDUCATE—Send for the new Catalogue of the Fort Edward Institute, N. Y. Superb brick buildings; 18 teachers with the best facilities in every branch of Commercial, Classical or Ornamental study. \$35 for 14 weeks. Term begins August 23d. Address Rev. JOSEPH E. KING, Fort Edward, N. Y.

**PITTSBURGH WATER CURE.** A first class CURE, in its sixth year, room for over 100 patients. Address Dr. H. FREASE, Pittsburgh, Pa.

**IOWA FARM FOR SALE.**—160 acres half improved, 12 miles from Keokuk, 3½ miles from railroad. Price \$1500.

ILLINOIS FARM for sale, 160 acres, part improved, 2 miles from Metropolis, price \$2000. These farms at the above prices are great bargains. For particulars address I. F. CHALLIS, Post-Master, Metropolis, Massac Co., Ill.

**VALUABLE FARM FOR SALE IN VIRGINIA.** 250 Acres, 6 miles from Fredericksburg, 1600 Apple, Peach, and Dwarf Pear Trees. Soil clayey loam, clay subsoil. Climate pleasant, and location as healthy as any in the United States. Price \$25 per acre. Intending to remove South. ABRAM VAN DOREN, Falmouth, Va.

Just Published:

**THE YOUNG FARMER'S MANUAL.**—By S. EDWARDS TODD. Containing Practical Directions for Laying out and Working the Farm, and how to erect Buildings, Fences, Farm-Gates, &c. The Work also embraces THE FARMER'S WORK-SHOP.

With full directions for selecting and using all kinds of farm and shop tools. The whole illustrated by 200 original illustrations. 1 vol., 16mo.; 439 pages. Price.....\$1 25

Also, recently published:  
**THE YALE AGRICULTURAL LECTURES.** Delivered at the Agricultural Convention, New-Haven, February, 1860. 12mo., cloth. Price.....50

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**HUNT'S PATENTS' AND PHYSICIANS' AID.** A Manual for every Family.....1 00

CATALOGUES describing a full assortment of AGRICULTURAL BOOKS sent free to any address.

C. M. SAXTON, BARKER & CO., No. 25 Park Row, New-York. Agricultural Book Publishers and Proprietors of the Horticulturist.

## To Onion Growers.

A neat pamphlet of 32 pages, containing the condensed but plain directions of *Seventeen practical Onion Growers*, residing in different parts of the country; and embracing full directions for every item of labor from selecting seed and preparing ground, to harvesting and marketing crop. Nowhere else can so full, complete, and useful information on this subject be found. Sent post-paid, on receipt of 21 cents (or seven 3-cent stamps). Address PUBLISHER OF AMERICAN AGRICULTURIST.

**PROFITABLE EMPLOYMENT may be had** by addressing (post-paid) R. SEARS 181 William-st., N. Y.

## Book Agents Wanted.

For circulars address GEO. F. TUTTLE, No. 100 Nassau-st., New-York.

**5,000 AGENTS WANTED.**—To sell 4 new inventions. Agents have made over \$25,000 on one,—better than all other similar agencies. Send 4 stamps and get 50 pages particulars, gratis. To sell Alarm Locks, Stenographers, Book Holders and Belt Hooks. EPHRAIM BROWN, Lowell, Mass.

## FLOUR AND GRAIN.

CHARLES HAIGHT, (FORMERLY OF THE FIRM OF HAIGHT & EMENS,) PRODUCE AND GENERAL COMMISSION MERCHANT, 39 Pearl-street, near Broad, New-York.

Refers to E. R. Cooper, Cashier Market Bank, New-York.

## SEED BUCKWHEAT.

SEED BUCKWHEAT, SEED BUCKWHEAT, For sale by R. L. ALLEN, 191 Water-street, New-York.

## THE GREAT AUSTIN SHAKER SEEDLING STRAWBERRY IS BELIEVED TO BE THE LARGEST STRAWBERRY IN THE WORLD.

This remarkable Strawberry originated at our settlement in Watervliet, N. Y., four years ago, and owing to its immense size, many have been induced to visit our garden, and examine for themselves the merits of this berry; and we believe but one opinion has been expressed—that it is the greatest acquisition ever made to our small fruits. A gentleman, a practical horticulturist, on a recent visit to England, having seen all of their largest strawberries, says the AUSTIN SEEDLING is the largest strawberry he has ever seen. The AUSTIN is believed to possess, in a remarkable degree, all of the most desirable qualities for a favorite family or market berry. It was grown beside the Wilson's Albany Seedling last year in our garden, both receiving the same cultivation. The AUSTIN was twice as large as the Wilson, and quite as productive. The flavor is of the best, much like that of the wild or common field strawberry. All who tasted it decided it to be much superior to the Wilson. The following is a correct description: Plant of uncommon vigor, foliage very large, footstalks long and very stout, holding the immense fruit from the ground, fruit very large and broadly conical, color bright crimson, flesh rather firm, mildly acid, with a rich and high flavor, flowers staminate, in full bearing about the 25th of June. Some of the berries will measure over two inches in diameter; twelve picked from a bed without extra selection weighed one pound. The condition of our soil does not favor the best results for this remarkable berry, the soil being sandy and poor, never having been trenched. Amateurs visiting our garden and examining the soil, when the AUSTIN is growing, believe that this monster may be increased one third in size in ground well trenched and properly manured.

We are aware that many new seedling strawberries have been offered to the public that have not given satisfaction, as they did not prove as represented. We propose to exhibit plants of the AUSTIN in full bearing, in pots, and berries in baskets, from the 15th June to the 4th July, at the following places: WM. S. CARPENTER'S office, 468 Pearl-street, New-York; at the office of the *American Agriculturist*, 189 Water street, New-York; office of *Honey's Magazine of Horticulture*, Boston; office of *Moore's Rural New-Yorker*, at Rochester; office of *Country Gentleman*, Albany; Farmers' Club of American Institute, New-York; and at Philadelphia. This will give all an opportunity to see and taste this remarkable berry; and if any, having ordered, do not feel satisfied after seeing for themselves, the money will be refunded, if desired, before the plants are delivered. The plants will be sold for \$4 per dozen, or \$25 per hundred. Orders received immediately for plants to be delivered, commencing in August in rotation as ordered. All orders must be accompanied with cash.

We could give many certificates from gentlemen of undoubted integrity who have seen and tasted the berry, who fully endorse our statements, if we thought it necessary, but we prefer exhibiting the plants and berries as above described, that no one may be deceived.

CHAUNCEY MILLER, Shaker Trustee, Albany, N. Y., or WM. S. CARPENTER, No. 468 Pearl street, New-York City.

## Wilson's Albany Seedling.

Hooker's Seedling!!

Strong, selected new plants of these desirable varieties, warranted true to name, carefully packed so as to insure safe transportation for any distance at \$7 for 100; \$4 for 500, or \$1 for 100, for sale by WM. RICHARDSON, Riverview, Albany, N. Y.

Raspberry and Blackberry Canes—all the desirable varieties for sale.

## Turnip Seed! Turnip Seed!!

J. M. THORBURN & CO., 15 John-st., New-York.

Offer to the trade and others the following varieties of TURNIP SEED, all of which they warrant of the same superior quality as have hitherto given such universal satisfaction:

Early White Dutch.....	per lb.....	\$0 75
Red Top Strap Leaf.....	do.....	75
Red Top.....	do.....	75
White Strap Leaf Flat.....	do.....	75
White French (extra).....	do.....	75
Large White Globe.....	do.....	50
Large White Norfolk.....	do.....	50
Long White Tankard.....	do.....	50
Swan's Egg.....	do.....	75
Vertue's Long White.....	do.....	75
Green Globe.....	do.....	50
Waite's Eclipse.....	do.....	50
Yellow Malta.....	do.....	75
Yellow Finland.....	do.....	75
Yellow Stone.....	do.....	75
Robson's Golden Ball.....	do.....	75
Yellow Aberdeen.....	do.....	50
Long Yellow French.....	do.....	75
Dale's Hybrid.....	do.....	50
Improved Ruta Baga (American).....	do.....	50
Skriving's do.....	do.....	50
Purple Top do.....	do.....	50
Marshall's Purple Top Ruta Baga.....	do.....	50
Bullock's Heart do.....	do.....	50
Dickson's Improved do.....	do.....	50
Long's do.....	do (extra).....	50
Ashcroft's do.....	do.....	50

Also,  
Round and Prickly Spinach, each, per lb.....50  
Corn Salad or Feticues, per lb.....1 00  
Rose cold Chinese Winter Radish, per doz. lb.....1 50

J. M. THORBURN & CO., 15 John-st., New-York.

## Turnip Seed. Turnip Seed.

Early Flat Dutch.....	
Strap Leaved Red Top.....	
Early Red Top.....	
Yellow Aberdeen.....	
Yellow Stone.....	
Large White Flat.....	
Large Norfolk.....	
Large White Globe.....	
Long White French.....	

Ashcroft's Swede, Rivers' Stubble, Skiving's Purple Top Rutabaga, Purple Top Rutabaga, Green Top Rutabaga, and all other varieties. White Sugar and Mangold Wurtzel Beet. Long Smooth Parsnip.

GARDEN, FLOWER and FIELD SEEDS, of all varieties. CORN—King Phillip, Early Dutton, and all other varieties. SEED BUCKWHEAT, extra clean.

Send for a Catalogue containing a full list of seeds and prices. R. L. ALLEN, 191 Water-street, New-York.

## RUSSIA OR BASS MATS. SELECTED

Expressly for budding and tying, GUNNY BAGS, TWINES, HAY ROPES, &c., suitable for Nursery purposes, for sale in lots to suit by D. W. MANWARING, Importer, 248 Front Street, New-York.

## Remarkable Success!

As the reports come in from the different parts of the Union where

## COOK'S PORTABLE



## SUGAR EVAPORATOR!

FOR MAKING SORGHUM AND MAPLE SUGAR,

was used last season, its success in the actual manufacture of Sugar is fully demonstrated. The certificates given below are but a small part of those received during a single week.

Read Carefully.

No other Evaporator has yet made Sorghum Sugar Successfully.

BLYMERS, BATES & DAY, Manufacturers, Mansfield, Ohio.

From Hon. J. M. MILLIKIN, Member of the Ohio State Board of Agriculture.

Mr. Millikin bought a No. 4 Copper Pan for boiling Maple Sap last Spring, and expresses his opinion as follows:

"IT IS ENTIRELY TOO GOOD FOR MY USE. I bought it to make Maple Molasses, but the Pan, by its remarkable yet scientific defecating arrangement, so thoroughly deprives the Syrup of its gummy or glucose matters, that before I was aware, the whole mass was hurried into Sugar, and I am free to say that the Sugar was the most perfectly grained and finest colored Sugar I ever saw. Owing to this beautifully defecating principle in the Pan, I have no doubt it will be equally successful in making Sugar from Sorghum or any other saccharine juices."

Hamilton, O.

MANSFIELD, Ohio, May 13, 1860.

MESSRS. BLYMERS, BATES & DAY: \* \* \* The Evaporator gave me perfect satisfaction. The Syrup from my best cane (kept separate) grained in three days' time, and made as beautiful an article of Sugar as any New Orleans JOHN REED.

DEFIANCE, Ohio, May 11, 1860.

MESSRS. BLYMERS, BATES & DAY: \* \* \* I used one of your Evaporators last year with great success, and made 573 gallons of the thickest and best Syrup I ever saw. On the 1st of May I set away a large portion of it to grain, and now in ten days' time it has sugared, and is well crystallized and dry.

I also made a quantity of Syrup for Mr. Franks, a neighbor, who did not set it for Sugar, but it has gone to Sugar in the barrel. J. Q. BEATTIE.

MESSRS. BLYMERS, BATES & DAY: \* \* \* I made twelve barrels of very nice syrup, very clear and pleasant tasted. I sold all but one barrel, which I put away for my own use. During the winter I placed a portion of it in a warm room according to your directions, to crystallize and succeeded beyond my most sanguine expectations. The result has been a well crystallized and dry sugar. Had I known as much last fall as I do now, I would have sugared the whole lot. The Evaporator is all that is needed to make Sugar successfully from good Sorghum juice. You are at liberty to use this as you see proper, Florida, Henry Co., O. ISAAC KARSNER.

TECUMSEH, Michigan, May 20th, 1860.

MESSRS. BLYMERS, BATES & DAY: It has more than met my expectations. My cane did not fully ripen yet I succeeded in making sugar, having found no difficulty at all in its graining. Your machine is all you represented it to be, and it is the only Pan that has had any success with cane juice in this neighborhood. Some of my neighbors have also made Cane Sugar on your Evaporator. JOHN RICHARD.

The following is from one of Vermont's most noted and enterprising Agriculturists:

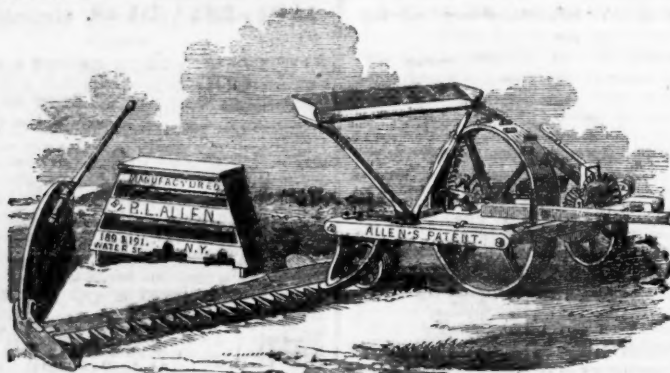
I am well satisfied with it, and shall have no hesitancy in recommending it to all sugar makers—(if I did not like it I should be the last one to recommend it to others). It boils faster, takes less wood, and makes better Sugar than can be done in any other way. GEO. CAMPBELL, Westminster, Vt.

This is to certify that in the fall of 1858, I made 60 pounds of good Sugar from Sorghum, and I have ever since used Cook's Evaporator, and in every instance it has given me perfect satisfaction. I have now in my house several gallons of well granulated Syrup which will make a beautiful article of Sugar when I come to drain it. ENOCH PAINE, Springfield, Ill.

MARION, Iowa, May 29, 1860.

MESSRS. BLYMERS, BATES & DAY: \* \* \* I enclose you a sample of my sugar. I had no trouble in making it. I put nothing into it to cleanse it—this is just as it came from the Evaporator—it has not been rebolled. Yours O. N. BRAINARD.

"I had no trouble in making sugar, a sample of which I send you." O. N. BRAINARD to Ed. of *Prairie Farmer*, Chicago, Ill. "The Sugar received is excellent—beautiful crystals."—Reply of Editor of *Prairie Farmer*.



### The Allen Mowing & Reaping Machines.

THE BEST IN THE WORLD. The Mower has been for many years the leading one in this country. It has been often victorious in honest trials among intelligent farmers, than any other. It has also become the leading Mower in Great Britain and France. In the severest tests ever applied to Mowers in Europe, it has easily beaten all competitors. The Emperor Napoleon has several Allen Mowers at work on the Royal farms. Eminent Agriculturists in various parts of Europe give them the preference over all others.

They are celebrated for light draft, perfection and rapidity of work, simplicity, great strength and durability. A platform can be attached at the expense of \$10, which makes them the best and most economical reapers in use.

Grain Cradles and scythes for meadows and lawns

Horse and hand, hay and glenning rakes, with steel and wood teeth, with and without wheels. Unloading forks, by the use of which, a horse is made to do the severest labor of the season.

**THRESHERS AND WINNOWER MACHINES AND HORSE POWERS.**

Cider, Wine, and Fruit Mills and Presses.

Corn Shellers and Hay Cutters for hand and horse power.

Every description of Agricultural and Horticultural Implements.

**FIELD, GARDEN, AND FLOWER SEEDS—a full assortment.**

**FERTILIZERS—Peruvian and American Guano, Bone Dust, &c., &c.**

R. L. ALLEN, 191 Water-st., New-York.

### Kirby's Harvester

Is the best combined MOWER AND REAPER in the world.

Price of Combined Machine.....\$130

Mower, only.....110

Send for a Circular.

GRIFING BROTHER & CO.,

60 Cortlandt-st., New-York City.

### Improved Iron Horse Power Pitch Fork.

For unloading Hay or loose Grain in the barn or on the stack—pitching or loading manure. The most durable, simplest, and best Fork made. It is an implement which is rapidly coming into general use, and is a most valuable labor-saving machine, which no farmer can afford to be without—it ordinarily more than paying for itself in one season.

Price, with three pulleys and hooks, 65 feet draft rope, and 20 feet hand rope, \$12—without rope, \$10.

For sale by

HERALD & TOMPKINS,

Trumansburg, Tompkins Co., N. Y.

and R. L. ALLEN, 191 Water-st., N. Y.

### FAIRBANKS'



### STANDARD SCALES.

#### ADAPTED TO EVERY BRANCH OF

Business where a correct and durable scale is required. Every Farmer should have a Fairbanks' Scale.

Send for a Circular.

FAIRBANKS & CO.,

139 Broadway, New-York.

### HAY—HAY—HAY.

INGERSOLL'S IMPROVED PORTABLE HAY PRESS, for packing Hay, Cotton, Rag, Hemp, Broom Corn, &c., &c., 700 of these machines having been sold during the last three years, letters from every State in the Union testify to their superiority, convenience and economy.

Price. Hay Press No. 1, \$50; wt. of bale 150 to 200 lbs. No. 2 \$75; wt. of bale 250 to 300 lbs. Cotton Press, \$150. Any sizes, and for any purpose of packing, made to order and delivered on shipboard in New-York. Address for Circulars or Machines FARMERS MANUFACTURING CO., Greenpoint, Kings Co., N. Y.

**A MALGAM BELLS.—Only one-third as much as Brass Composition, with tone and strength equal.** Farm, School-houses, Shops, and Hotels supplied, 50 to 200 lb. Bells at \$5 to \$25 each. Churches, Academies, Fire Alarm Bells, 5000 lbs., \$225; 1700 lbs., \$175; 1000 lbs., \$125; 825 lbs., \$100; 650 lbs., \$75; 500 lbs., \$60; 450 lbs., \$55; 300 lbs., \$35; complete and warranted 12 months, with Yoke, Standard, Wheel and Tolling Clapper, and delivered at express offices, railroads, or steam boats.

Also, People's Farm Mill, complete and warranted, \$40.

M. C. CHADWICK & CO., 17 Spruce-st., New-York.

### Sugar Evaporator.

Cook's Patent for converting Sorghum, Cane, and Maple juice into finely granulated sugar in 30 to 60 minutes. This is the only successful Sorghum evaporator yet invented, and it possesses decided advantages over other evaporating pans for either maple or cane juice. For sale at the Agricultural Warehouse of

R. L. ALLEN, 191 Water-st., New-York.

### Griffing's Improved Potato Digger

The best Digger ever offered to the farmer. It is easily converted into a double mold-board Plow. Farmers! call and see it at

GRIFING BROTHER & CO'S

North River Agricultural Warehouse,

60 Cortlandt-st., New-York.

### Bee Hives.

LANGSTROTH'S celebrated movable comb BEE HIVE.

Price \$5.

Langstroth's Book on the Honey Bee, \$1.25.

For sale by

R. L. ALLEN, 191 Water-st., New-York.

### Keystone Cider Mill,

HICKOK'S PATENT.

### KEYSTONE CORN STALK CUTTER AND GRINDER,

HICKOK'S PATENT.

Circulars of the above machines, giving full description, will be furnished on application by

GRIFING BROTHER & CO.,

60 Cortlandt-st., New-York City.

### LONG ISLAND POTTERY AND TERRA COTTA WORKS

North 7th-st., Williamsburg, Depots 7 Court-st., Brooklyn, and 75 Nassau-st., New-York.

Glazed and vitrified stone ware drain pipes, of superior quality—2 foot lengths, 2 to 12 inches diameter, 2 c. to 55 c. per foot. Sweeps, Traps, and Branches at corresponding rates. Stock, catalogues and price lists as above. Orders promptly executed, and no charge for cartage. Also continually on hand Chimney Tops, Vases, &c. Call and examine.

EWD. H. QUINN, Proprietor.

## EXCELSIOR AGRICULTURAL WORKS

ALBANY, N.Y.

CHARLES E. PEASE,

PROPRIETOR

EXTRAORDINARY INDUCEMENTS—READ AND PROFIT BY IT.

Upon receipt of the CASH I will deliver, during the present season, FREE OF EXPENSE, at any station on the line of the principal railroads East of the Mississippi and North of the Ohio rivers, any of the celebrated Premium Machines of my manufacture, at their USUAL RETAIL PRICE HERE—to wit:

Improved Excelsior

Railway Two-horse Power with Thresher and Cleaner...\$250

" " " " and Separator 160

" One " " " 125

" " " with Circular Saw Mill and Saw 125

Thresher and Cleaner alone.....125

as well as any other machines of my manufacture—more particularly mentioned in circulars, which can be had on application to the subscriber. My machines have all been thoroughly and repeatedly tested, and have NEVER FAILED.

REMEMBER you run NO RISK in ordering, as all my manufactures are WARRANTED. In ordering be particular to state at what station and on what railroad you wish the machine delivered. Send in your orders early, as "first come, first served."

CHAS. E. PEASE,

Excelsior Agricultural Works, Albany, N. Y.

### NEW-YORK AGRICULTURAL IMPLEMENT, Machine, and Seed Warehouse.

### R. L. Allen, 191 Water-st., N. Y.

The attention of Farmers, Merchants, and all interested, is invited to my large and unequalled assortment of Agricultural and Horticultural Implements and Machines.—The greatest care in the selection of articles I offer for sale, to have them of the best and most approved patterns, and that they be made in the most substantial manner.

I particularly call attention to my superior Burr Stone and Iron Grain Mills, Horse-Powers, Threshers, Mowing and Reaping Machines, Saw Mills, Corn Shellers, Hay, Fodder, and Stalk Cutters, Presses, Pumps, Brick Machines, Carts and Wagon, Cotton Sweeps, Cultivators, Harrows, Plows of every variety, Garden Tools, &c.

FERTILIZERS—Peruvian Guano, Bone Dust, Phosphate of Lime, Dried Blood and Wool, Plaster, &c.

Orders solicited for the above, and for STEAM ENGINES and MACHINERY OF ALL KINDS, which shall receive prompt attention, and be filled on our best terms.

### ALBANY TILE WORKS,

Corner of Clinton Avenue and Knox Streets,

ALBANY, N. Y.

#### ROUND TILE.

1 1/2 inches round.....\$ 8 per 1000 feet.

2 1/2 " " " " " 12 " "

3 1/2 " " " " " 40 " "

#### HORSE SHOE TILE.

2 3/4 inches rise.....\$10 per 1000 feet.

3 3/4 " " " " " 15 " "

4 3/4 " " " " " 20 " "

5 3/4 " " " " " 35 " "

6 3/4 " " " " " 55 " "

7 3/4 " " " " " 75 " "

#### SOLE TILE.

2 inches rise.....\$10 per 1000 feet.

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5 " " " " " 30 " "

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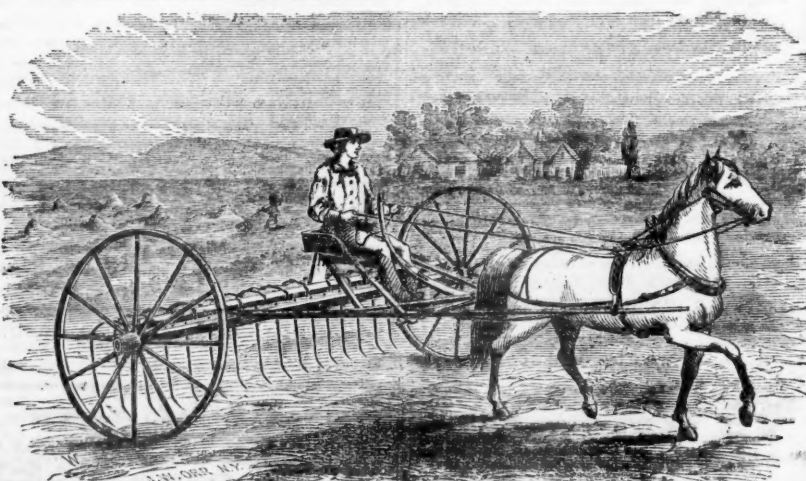
8 " " " " " 60 " "

9 " " " " " 200 " "

Orders solicited. Terms cash.

TILE MACHINES MADE TO ORDER.

Address C. & W. McCAMMON, Albany, N. Y.



### Patent Steel Tooth Self Delivering Horse Hay Rake.

This we consider an improvement over any Horse-Rake before made. By lightly pulling the lever in front of the seat, the teeth are raised and the hay is left in windrows, in excellent condition for pitching. It is also admirably adapted for raking wheat, oats, or stubble, as it does not waste the grain, nor collect as much rubbish as the ordinary rake.

It will rake more hay than twenty men can in the same time. Price \$25.

For sale by

R. L. ALLEN, 191 Water-street, New-York

### HORSE POWERS AND THRESHERS.

—Endless Chain and Circular Powers of our own and other patterns, a large variety at manufacturers prices.

R. L. ALLEN, 191 Water-st., New-York.

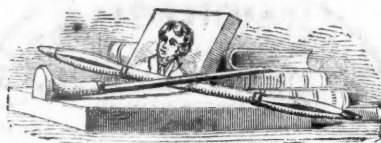
### SHARE'S Patent COULTER HARROW.

SHARE'S PATENT PLANTER AND HOE.

SHARE'S PATENT HOE.

For sale by R. L. ALLEN, 191 Water-st., N. Y.





## DESIGNING AND ENGRAVING ON WOOD.

All who may desire to have designing or engraving done, will find it to their advantage to call on the subscriber, who is prepared to furnish on the most reasonable terms, and in the best style of the art, PORTRAITS, views of BUILDINGS, PLANS, &c., of Agricultural Implements, Horticultural and Scientific subjects of every description.

THOMAS COX,  
105 Nassau-st., corner of Ann-st., New-York.

A NEW PATENT,  
Self-testing Preserve Jar.

The subscriber is now prepared to offer to the public what has so long been needed, viz: a preserve can or jar that will give certain indication whether the fruit contained therein has been properly prepared, and can be depended on to keep, before the same can have time to ferment and thus ruin the contents, for both fruit and sugar in such cases are wasted. It is almost incredible the amount of materials lost, either by jars constructed on wrong principles, or a want of care in doing up the fruit, and which heretofore could not be detected in time to remedy the difficulty.

## SIZES AND PRICES.

Glass.	Tin.
Pints, per dozen.....\$2 50	Pints, per dozen.....\$2 00
Quarts, do ..... 3 00	Quarts, do ..... 2 50
½ gallon, do ..... 4 50	½ gallon, do ..... 3 50

A liberal discount to the trade.

EDWARD P. TORREY,  
9 Platt-street, New-York.

MASSER'S  
FIVE MINUTE  
ICE CREAM FREEZERS.

AS IMPROVED FOR 1859, WITH STAMPED IRON COVERS AND BOTTOMS—TINNED.

The only Freezer known which is constructed on true Scientific principles.

The Cheapest, Best, and most Economical; requiring less ice and less labor than any other, being at the same time the most durable in Structure, and most certain in its operations. Sole Agent for the United States, E. KETCHAM & CO., Manufacturers of Japanned and Platinized Tin Ware, 289 PEARL-ST., NEW-YORK.

TORREY'S PATENT  
Four-Minute Freezers

These popular Freezers, that have been newly improved since last season, are decidedly the most rapid and perfect Freezer in use.

Being constructed on strictly scientific principles, they are both simple and effective. Plain directions for use, and several valuable recipes for making Ice-Cream and Water-Ices accompany each Freezer.

For sale by all the leading furnishing stores.

## SIZES AND PRICES.

3 quarts.....\$2 50	8 quarts.....\$5 00
4 do ..... 3 00	14 do ..... 7 00
6 do ..... 4 00	20 do ..... 10 00

P. S.—A liberal discount to the trade.

E. P. TORREY, Manufacturer and Patentee,  
No. 9 Platt-street, New-York.

**MASSER'S 5 MINUTE ICE CREAM FREEZER** of all Sizes.  
REFRIGERATORS—Hedenberg's celebrated patent revolving and ventilating refrigerator. For sale by  
R. L. ALLEN, 191 Water-st., New-York.

## The Air Pressure Churn.

The Air Pressure Churn has been proved by some of the best dairymen in the country to be the only perfect churn in existence. It has no dashers, but works by the aid of condensed air; is simple, durable, and quick working, and warranted to make more butter than any other churn, invariably of the best quality.

From the New-York Century.

"The Air-Pressure Churn secures the greatest possible rapidity of process, with the utmost evenness of grain. It, furthermore, gains seven per cent. more butter, out of the same quantity of milk or cream, than the old-fashioned machines. In short, it makes an article more nearly perfect than any instrument now known. The grand secret of its success consists in bringing every particle of the milk or cream to the equal action of the air, and to that air in a state of condensation."

Entire satisfaction given or the money returned.  
[Send for a circular with prices, &c.]  
Address the  
AIR PRESSURE CHURN CO.,  
Nos. 182 and 184 Greenwich-st.,  
New-York.

Important to Housekeepers!  
E. R. DURKEE & CO'S  
SELECT SPICES.

In this age of adulterated and tasteless Spices, it is with confidence that we introduce to the attention of housekeepers these superior articles. We guarantee them not only

absolutely and perfectly pure,

but ground from fresh Spices, selected and cleaned by us expressly for the purpose, without reference to cost. They are beautifully packed in tinfoil, (lined with paper,) to prevent injury by keeping, and are full weight, while the ordinary ground Spices are almost invariably short. We warrant them, in point of richness and flavor,

beyond all comparison,

as a single trial will instantly prove.  
Manufactured only by E. R. DURKEE & CO., New-York.  
For sale by dealers in choice groceries generally.

## Rubbing &amp; Wringing done away.



## METROPOLITAN WASHING MACHINE.

For sale by WM. FALKNER & SON, San Francisco, Cal.  
Wholesale and retail by  
LE ROY & CO.,  
Hartford, Conn., and  
DAVID LYMAN, Middletown, Conn.

Send for a circular.

**\$5 \$5 \$5 \$5 \$5**  
**BABBITT'S SOAP.**

PRICE PER BOX \$5.

Mr. B. T. BABBITT, the well known Saleratus manufacturer, is bringing out a new and useful article of

## SOAP,

Put up in boxes of 60 pounds each in 1-pound bars, price \$5 per box. This Soap is rapidly taking the place of all other Soaps wherever introduced. One pound will go as far as 3 pounds of ordinary family Soap. It will wash in either hard or salt water; it does not injure the fabric—on the contrary, it preserves it and fixes the colors. It will remove paint, grease, and stains of all kinds. But little labor is required where this Soap is used. Directions sent in each box for making ONE POUND OF THE ABOVE SOAP INTO THREE GALLONS OF HANDSOME SOFT SOAP. Send for a box and give it a trial. If you do not know its value, by which I am able for the present to offer to any person, remitting to me \$5 on any solvent bank in the United States, one box of the above soap, and a receipt for one year's subscription to either of the following New-York papers, viz.: American Agriculturist, The Examiner, The Weekly Tribune, The Christian Advocate, The Weekly Day Book, The Scottish American Journal, The Weekly Times, Hankins' Family Pictorial, The Century, United States Journal, The Independent.

Or, if preferred, I will send The Semi-Weekly Tribune six months, or the Daily Tribune, Times, or Sun two months. Please be particular and give full directions for shipping the goods. Also, give the name of your Post-Office, with the State and County in which you reside.

B. T. BABBITT,  
Nos. 64, 66, 68, 70, 72, and 74 Washington-st., New-York.  
P. S. I will send the Soap without paper on receipt of \$4 20.

## Housekeepers Take Notice.

The subscriber begs to warn you against the gross imposition that is being practiced upon the unsuspecting. Four years have elapsed since JAMES FYLE first brought his

## DIETETIC SALERATUS

before the public. The immense demand that has since arisen for it, the testimony of over two hundred thousand intelligent families, and the approval of the best chemists in America, all combine to substantiate the inventor's claims, viz: that it is the only strictly wholesome and effectual Saleratus in use.

It was put up in pink or red papers to distinguish it from all others; but of late the Saleratus makers in the country are putting up their goods in the same style, copying the directions, with recommendations that theirs is the same in purity as Fyle's genuine Dietetic, when in fact it is entirely different. In most cases theirs contains a slow poison. Your safest plan will be to shun every thing done up in red papers that does not bear the name of

"JAMES FYLE, 345 Washington-street, New-York."

**COAL SIFTER.**—This excellent cheap Machine, described in the *Agriculturist* for February, 1860, (and which is now in constant use and highly approved by the Editor of this Journal, and by thousands of others,) may be obtained, wholesale and retail, of the manufacturer.

SANFORD ADAMS, Lincoln-st., Boston.

or of REA & POLLOCK, 48 Cortlandt-st., New-York.

## BEAN AND SEED SEPARATORS for

Beans and all kinds of grain and fowl seeds, for sale as above.

## Electric Weather Indicator.

Every house should have one of these neat and curious instruments, which indicate the weather from 12 to 24 hours in advance. Sent free by mail on receipt of 50 cents, by addressing the manufacturers  
LEE & CO., Box 80, F. O.,  
Liberal discount to agents. Newark, New-Jersey.

**SAVE YOUR MONEY and preserve your health.**—A. BROWER'S Patent Composition makes and keeps Boots and Shoes waterproof, and they will last as long again for using it. For sale every where.  
A. BROWER, 4 Read-st., New-York.

## Whale Oil Soap.

For destroying insects on Trees, Vines, Shrubs and Plants. For sale in large and small quantities at DAVID S. BROWN'S Soap, Oil and Candle Works, 10 Peck-slip, New-York.

**JERSEY CATTLE.** Commonly known as "ALDERNEY," SHANGHAI or TARTAN Sheep for sale. Apply to WILLIAM REDMOND, 43 Barclay-st., New-York.

**SUFFOLK SWINE.**—The Subscribers have on hand and for sale pure blood Suffolk Pigs, bred from their own importations and descendants. Address  
ISAAC STICKNEY, or  
JOSIAH STICKNEY, Boston, Mass.

ITALIAN BEES (*Apis Ligurtica*.)

TO ALL AMERICAN BEE-KEEPERS—Greeting: In consequence of an unwarrantable interference by others in my legitimate business, I make the following statement: In the advertisement of the June *Agriculturist*, there was a "Caution" aimed directly at the purity of my Bees. I challenged the owner through the N. Y. City papers to place his bees along side of mine in the office of the *Agriculturist*, conceding to him the appointment of all and as many judges as pleased him. He declined the test. Reader, did I or did I not offer fair? My bees were examined by a number of truly scientific Bee-keepers, (including Mr. Quinby,) and other gentlemen, all of whom pronounced them pure.

At my own cost I visited Europe, selected the Bees and returned with as pure as there is in the world. Another party, at the expense of the U. S., likewise went. The Bees for the Patent Office arrived dead—of those purchased on his private account, a portion arrived safely. It now appears that I, a poor man, shall not be allowed to sell my Bees without his permission—(see June *Agriculturist*.) "Confer a favor by demanding to see a bill of sale from me." Mr. P. offered me \$5 for each of my orders when the money was paid. Generous, is it not? I answered not, content with my own business, but which has been materially injured since the said "Caution" was published. I may find a remedy hereafter for this most cruel and unjust attack. I now say to you, Mr. Editor, as well as to your readers—that I know my Bees to be as pure as there are in Europe. I am now hatching most beautiful Queens daily at my new isolated Apiary, (no common Bees within one mile,) and only await, before commencing my deliveries, the certainty of their importation by Italian drones. Those on my books will please bear with me a short time. Those who have ordered and are willing to take the risk of pure impregnation can have the Queens, &c., immediately. Gentlemen sending 12 cts. to pay postage, will receive a few Bees as a sample by mail. Queens, &c., sent by express for \$10.

Here are a few words from the gentleman who brought over from Europe a portion of Mr. Parson's Bees, and who is directly from the Alps, "where no other race is found." "This may certify that I have examined the Italian Bees of Mr. Kennedy, which he procured of Mr. P. J. Mahan, and pronounce them pure, and equal to any imported or owned by Mr. S. B. Parsons. Signed, A. BOMMER, New-York, June 3, 1860." Interested parties will send for a circular containing full, convincing and satisfactory evidence of the purity of my Bees. My Bees were the first landed in America. Now, Bee-keepers, here is part of my evidence—shall I or shall I not be remunerated for my great expenditure in this matter?

PHINEAS J. MAHAN, 720 Chestnut-st., Philadelphia,  
Apiary, South Camden, N. J.

## COTTON SEED MEAL.

In Bags containing 100 lbs. each. For sale by  
F. H. HOYT, Dealer in Flour, Fertilizers, and Grass Seeds,  
No. 122 West-st., corner of Dey-st., New-York.

## GUANO.

We would call the attention of Guano Dealers, Planters, and Farmers to the article which we have on hand and for sale at FORTY PER CENT LESS THAN PERUVIAN GUANO and which we claim to be superior to any Guano or fertilizer ever imported or manufactured in this country. This Guano is imported by WM. H. WEBB, of New-York, from Jarvis' & Baker's Islands, in the "South Pacific Ocean," and is sold genuine and pure as imported. It has been satisfactorily tested by many of our prominent Farmers, and analyzed by the most eminent and popular Agricultural Chemists, and found to contain (as will be seen by our circulars) a large per centage of Bone Phosphate of Lime and Phosphoric Acid, and other animal organic matter, yielding ammonia sufficient to produce immediate abundant crops, besides substantially enriching the soil. It can be freely used without danger of burning the seed or plant by coming in contact with it, as is the case with some other fertilizers; retaining a great degree of moisture, it causes the plant to grow in a healthy condition, and as experience has proved, free of insects. For orders in any quantity, (which will be promptly attended to,) or pamphlets containing full particulars of analyses and tests of farmers, apply to

JOHN B. SARDY, Agent.

No. 58 South-st., corner of Wall-st., New-York.

## AMERICAN GUANO

FROM

Jarvis and Baker Islands

IN THE SOUTH PACIFIC OCEAN,

Under the protection of the U. S. Government,

IMPORTED BY THE AMERICAN GUANO CO., N. Y.

This Guano, far superior to any other Fertilizer known, and of permanent value to the soil, is sold by the Company at their office, No. 66 William-st., in large or small quantities, at \$40 per ton. Liberal discount made to dealers.

Every package sold by the Company will be stamped with their trade mark.

Orders from the country will be promptly attended to. For full particulars and pamphlets, address

AMERICAN GUANO CO.,  
No. 66 William-street, New-York.

## 50 TONS PHOSPHATE LIME, put up

in bags. Price \$38 per ton,	per cent.
Containing	
Organic Matter and Moisture.....	20
Bone Phosphate of Lime.....	48
Soluble or Bi-phosphate of Lime.....	10
Carbonate and Sulphate Lime.....	18
Silica and insoluble matter.....	4

For sale by  
TREDWELL & PELL,  
45 Fulton-st., New-York.

## FEEDING STOCK.

For growing Turnips—Use HOYT'S BONE SUPERPHOSPHATE OF LIME. Office No. 194 Water-street, New-York, adjoining United States Hotel.

## GENUINE No. 1 PERUVIAN GUANO.

American Guano.	Bone Dust.
Superphosphate of Lime.	
Dried Blood and Wool.	Land Plaster.
Fondrette.	

For sale at lowest market price, and in quantities to suit.  
R. L. ALLEN, 191 Water-st., New-York.

## Bone Manure.

For sale by the Manufacturers, ground Bones of all grades of fineness for fruit trees, cropping, and top dressing; also Bone Swed Superphosphate of Lime, all warranted pure and of the best quality. Address A. LISTER & BROTHERS,  
Tarrytown, Westchester Co., N. Y.

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## A Mean Imposition by Postmasters.

## A REQUEST TO ALL SUBSCRIBERS.

On page 154, May No., we briefly alluded to the fact that certain Postmasters had lent their influence to a Philadelphia humbug. Since then we have received from sundry subscribers copies, of lottery circulars, money-making schemes, land enterprises, and, worse than all, if possible, small pamphlets with obscene cuts, sent out as "specimen pages" of a book published in Philadelphia. These several articles have been received by subscribers closely folded in their regular copies of the *AGRICULTURIST*, where they have appeared to have been placed by the publisher of this journal. We have been written to, to know whether we really endorsed these several schemes, as the sending them out thus would appear to indicate.

This is a downright, mean imposition, both upon the subscriber and the publisher. The objectionable documents must have been placed in the paper by direct act, or by the connivance of certain postmasters, or their clerks. We can not judge how extensively the practice has been carried on, as we know not how large a proportion of those who have received them, have taken the trouble to notify us of the fact. We shall spare no efforts to ferret out the offenders, and if they do not lose their official positions, as one at least has already done, we shall have less faith in the integrity of the men at the head of the Department, than we now have.

We wish here to say to all our readers, that we never, for any consideration, allow any advertising bills, circulars, or other documents of any kind, good or bad, to be inclosed in copies of the *Agriculturist*. And we ask, as a special favor, that each and every subscriber who may receive any thing of the kind folded up in a copy of our paper, would make a note upon it of the time and place when and where it was taken out of the post office, and promptly forward it to us, with particulars, and give us any practicable aid in ferreting out the guilty parties.

## JULY SEED PREMIUMS.

ROOTS! ROOTS!! ROOTS!!!

FILL UP THE VACANT SPOTS.

"On the Twenty Fifth of July,  
Sow your Turnips, wet or dry,  
If it don't come on Sun-di."

So runs the old adage. Rapid growing varieties may be sown as late as August. The slower growing kinds should be put in early in July, or before.

On every farm and in every garden there are now some vacant spots, which will run to weeds if not used. In all these places scatter turnip seed, and instead of weeds, get a fine lot of turnips, both for the table, and for Fall, Winter, and Spring feedings. They will cost but little time and trouble.

We have some seeds of three of the best kinds of turnips, which we now offer as premiums to those who will procure and forward new subscribers. Viz:

(No. 71) Long White French Turnip, as improved and grown by J. E. Macomber, Newport Co., R. I. This we have found the best table turnip, and the best keeper we have ever known. May be sown from June 1st, to August 1st. (See page 167.)

(No. 17) Red Strap-Leaf Turnip—a good turnip, and the quickest growing kind we have ever raised. It may be sown at almost any time from April to August, and comes quickly to maturity.

(No. 6) Ashcroft's Swedish Turnip—one of the best of the Swede turnips or rutabagas. May be sown from June 1st, to July 15th.

## TERMS OF THE PREMIUMS.

To any person now sending a new subscriber, and \$1, we will present, when desired, a post-paid parcel containing one-eighth of a pound of the seed of the above turnips (a part of each kind.) This with careful sowing, will suffice for 40 to 50 square rods, and yield from 50 to 200 or more bushels of turnips, the amount of crop will of course depend upon the goodness of the soil, the time of sowing, and the Autumn weather. The seed we will send post-paid except to the Pacific Coast and Canada. When to go to either of those localities, the recipient will need to send 7 cents extra postage for each half ounce of seed desired. (N. B.—If new subscribers are sent in as members of old or new clubs, and at club prices, the receiver of the premium will be expected to forward the postage on the seed, viz., 12 cents, if the full two ounces are desired.)

In addition to the above, an extra half ounce will be presented to the new subscriber himself, if the usual post-paid (3-cent stamp) envelope be provided for sending it in.

**Premium Notice—Special.**—When names are sent in on which any premium is desired, the sender should always give plainly the number of the premium

expected. When this is not done, of course our clerks can not forward any premium, as they do not know what to send. This will explain the non-reception of premiums in a few cases which have already occurred.

## New Premium—Porable Barometer.

It will be seen by reference to page 219, that our premiums for subscribers obtained for Vol. XIX (1860), are still open, so that those who have not yet completed their lists can still do so. It will be understood that these premiums are limited only to subscribers for the complete volume; that is, all names obtained at any time during the year, for the entire volume of this year, may be counted, in making up a list of names for a premium. We can not, of course, add together a few names obtained during different years, and count them in one list. ... Two half year subscriptions may be counted as one whole year.

The New Premium (No. 28) is worthy attention, viz.: *Kendall's Aneroid Portable Barometer*. Upon the strong recommendation of Prof. Silliman, of Yale College, we purchased one of these instruments several weeks since, and have very frequently compared it with a costly standard mercurial barometer at Blunt's establishment. We find it remarkably accurate, and from what we have seen of this and other instruments of the same kind and manufacture, we are prepared to recommend them. The state of the atmosphere is shown by means of springs instead of by the troublesome mercurial column and cup, so that it is easily carried in any position, and is not in danger of getting out of order. A barometer indicating approaching changes in the weather, is almost as valuable to the farmer, as to the mariner, and we believe most farmers would find \$10 well invested in purchasing one of these instruments. We shall keep an extra instrument or two on hand for premiums, and to dispose of to those who can not get them more conveniently from dealers.

## CLUBS

Can at any time be increased, by remitting for each addition, the price paid by the original members—provided the subscriptions all date back to the same starting point. The back numbers will, of course, be sent to added names.

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